

A CONCEPTUAL STUDY OF 'NASA HI SIRSO DWARAM W.S.R. TO NASYA KARMA'

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ABSTRACT

Drug administration through nose is convenient way in various diseased conditions. So it is today's need to use every possible, structural pathway for medication and for this purpose Anatomical knowledge is much more necessary. According to Acharya Charka, those who have good knowledge of Sharir becomes a good physician and can give good treatment to the people. Shir (Head region) is one of the important and vital organ of the body. Various acharyas quoted that "Nasa Hi Sirso Dwaram" means, Nose is the gateway of Head, Due to this Nasya karma which is a main treatment for all diseases related to Uttamanga (supraclavicular region). It is today's need to explore Anatomical approach behind the "Nasa Hi Sirso Dwaram". There are many potential benefits of nasal drug administration such as; It is convenient site useful for absorption of drugs, there is good systemic supply and there is a liver bypass, it crosses blood-brain barrier. Hence, it proves that 'Nasa Hi Sirso Dwaram. Acharyas are aware about all these things. Only due to this Nasya-karma is effective clinically. After discussing all these points we can understand the pathway of the pharmaceuticals, used in the Nasya vidhi.

KEYWORDS: Nasa Hi Sirso Dwaram, Ghranendriya, Urdhvajatrugat, Uttamanga.**INTRODUCTION**

Ayurveda is an art of living and science of healing, Ayurvedic classics are full of preventive aspects of diseases & at the same time they guide us to promote the health of society^[1], various therapies of medications are used in Ayurveda for administration of drugs. Panchkarma therapy is one of them and it is combination of five special procedure used in various types of diseases. Nasya karma is one of the procedure of Panchakarma, which is widely used in Urdhvajatrugat vikara.

Anatomy of NASA Sharir-an Ayurvedic review

According to Acharya Sushruta^[2], there are about nine bahirmukh srotas, among them two srotas are Nasa, external part of each Nasaput is of two angula in pramana and transverse diameter of the internal surface of each Nasaput is 1/3 angula pramana. according to other Acharyas, the transverse diameter of the Nasaput is two-third angulas. Acharya Charaka describes, Nasa is four angul in pramana and he also describes, Nasa is not an indriya, as it is the seat of one of the indriya known as ghranendriya.^[3] All the indriyas along with Ghranendriya, the Dnyan, Ayu, Sukha and Dukha, all these take birth from Atma only.^[4] All Indriyas and organs of the body originate in the third month of fetal life. Tarpana Kapha, which is situated in head region, provide Tarpana to all the Indriyas of the body.^[5] As per the Panchapanchaka, NASA is such structure which

perceives the sense of smell because it is predominated by the Prithivi Mahabhuta.

NASA has three Asthi (Bones) and these are types of Tarunasthies^[6], Asthi sandhi: there is one Asthi Sandhi in NASA Sharir. Peshi: there are two Peshi (muscle) in the nose. Marma: two Marma are concerned, namely Phana Marma and Sringataka.^[7] It runs twenty four Sira, namely six Vatvaha, six Pittavaha, six Kaphvaha and six Raktvaha. Avedhya sira: 4 in numbers of Avedhya sira in the nose, which are placed near to NASA Randhra. Dhamani: they are two in number and carries Gandh (smell), they carry the smell to the root of the nose also known as Nasamoola.^[8] From there, they will carry the same to the brain. It is the beginning of Pranavaha Srotus. In Yoga Shastra at the time of description of the Nadis Ida and Pingala, Acharyas described that, the Ida nadi is for the right nostril and Pingala Nadi is for left nostril.^[9] Acharya Charaka has considered as the NASA is the gateway of the Sira and he also added that, the Nasya karma is the best therapy for all the types of Shirorogas.^[10]

Anatomy of NASA Sharir-an modern review^[11,12,13]

Nose consists of a pair of nasal cavities divided by a nasal septum. Nasal cavities are bony frameworks, which extends anteriorly as external nose. Nose serves to warm, humidify and to filter some particles from the inhaled air. For the purpose of study nose is divided into two main parts;

1) External nose and 2) Nasal cavity or internal nose.

External nose

The external nose is pyramidal shaped and its upper angle, called **root**, is continuous with the forehead; its free angle or tip known as **apex**. On the inferior aspect, rough elliptical aperture, the external **nares** or nostrils. The nostrils are separated from each other by the **septum**. Dorsum nasi is the union of the lateral surface in the median plane of the nose. Upper part of the external nose kept patent by the nasal bones and the frontal processes of the maxillae. The lateral surface at its lower end rounded shaped called **Alae Nasi**. The framework of external nose is composed of the bones and hyaline cartilages.

Bony framework:- The bony framework, which one support its upper part consists of;

1. **Nasal Bones:-**Each nasal bone has two surfaces and four borders.
2. **Frontal processes of maxillae:-**It possess an upper end, two surfaces and two borders
3. **Nasal part of the frontal bone:-**It is downward projection of frontal bone between two supraorbital margins. Its lower serrated part is called as nasal notch.

Cartilaginous framework: The cartilages and bones are connected with each other by continuity of the perichondrium and periosteum. The cartilages and the intervening connective tissue regions surrounding the nares is regarded as a form of valve, controlling the intake of air. There are three cartilages, which form the framework of the nose. These are as; Septal cartilages, Lateral cartilages, Major alar cartilages.

The nasal musculature: In the nasal musculature, three muscles are involved, namely Procerus, Nasalis and Depressor Septi.

Nasal Cavity

The nasal cavity (i.e. the internal nose) is the first respiratory passage, which one is irregular shaped space, which extends from the roof of the mouth upwards to the base of the skull.

Nasal septum divides the nasal cavity into right and left halves. Each half opens on the face by the nares or nostrils. They are somewhat piriform apertures, narrower in front than behind. Each measures from 1.5 cm to 2 cm Antero-posteriorly and 0.5 cm to 1 cm transversely.

Boundaries of the nasal cavity:- The nasal cavity has a roof, floor, and medial and lateral walls.

Nasal mucous membrane: It lines in whole nasal cavities, except the vestibule. It is intimately adherent to the periosteum or perichondrium. Nasal mucous membrane continues with some other structures of the head.

Vascular supply of nose: Anterior and posterior ethmoidal branches of the ophthalmic artery, Sphenopalatine branch of the maxillary artery, terminal part of the greater palatine artery, The connections of the veins of the nose, upper lip and cheek with the drainage area of the ophthalmic veins are clinically significant.

Lymphatic drainage of Nose; Lymphatic drainage of the nose and nasal cavity drains into submandibular group of nodes and superficial parotid nodes.

Nerves supply of Nose; Nerve supplies to nose Infratrochlear and Infraorbital nerves. Nasal muscles are innervated mainly from the buccal branches of the facial nerve.

Drug Administration through NASA - Nasya

As per the Ayurved compendia, introduction of pharmaceuticals through the nasal route is called NASYA.^[14] Nasya karma is particularly indicated in Jatroordhwagat Vikaras^[15] i.e. ENT diseases; the nasal cavity has been considered, as a route of drug administration, since many decades, often for tropical therapies such as, decongestants. Recently, however there has been a great deal of research, investigating the nose as a route for systemic therapies, especially for peptides and proteins. There are many potential benefits of nasal drug administration such as; It is convenient site useful for absorption of drugs, there is good systemic supply and there is a liver bypass.

DISCUSSION

Dosha, from the Head region have some relation with Nose directly or indirectly, because the work site of these Dosha is Nose. By the same way we found relations of functions of Dhatu found in the Head region, with functions of same Dhatu found in the NASA, i.e. in the Nasal area. As; Rasa and Rakta Dhatu gives Poshana and Jeevana to the NASA. Mansa gives Lepam and Meda Dhatu provides Snehana to the NASA. Asthi Dhatu provides proper shape to the NASA. Majja Dhatu supplies Poshana to Ghranendriyas, present at the site of NASA, and Shukra Dhatu provides immunity to the NASA and structures related to NASA Sharir.

Malas present in the Sira Pradesh are come out, through the nose and they provide some special useful functions too. Such as Kha Mala is the Mala of mans Dhatu which was excited through the NASA and it plays an important role in the process of respiration.

The mucous membrane of the nasal cavity is physically continuous; through the ducts with paranasal sinuses and through Eustachian tube with ears, through the slings of the myelinated sheath with olfactory bulb, through Nasopharynx with the oral cavity and through the nasopharynx with the respiratory tract.

For the nasal pharmaceuticals, to reach at its specific site so many things are necessary as per the modern science.

Such as; drug should be modified according to necessity, mucosa of drug administration area should be altered, for proper drug absorption Enhancers should be added in it, ionization of the drug should be totally avoided and the mode of designing the drug should be altered. Our Ayurvedic Acharyas are aware about all these things. Only due to this Nasya-karma is effective clinically. After discussing all these points we understood the pathway of the pharmaceuticals, used in the Nasya vidhi for better understanding of Nasa Hi Sirso Dwaram.

CONCLUSION

Shira (Head) has an utmost importance because, it is considered to be a controlling center of the body, so it also known as Uttamanga. For the medication of this Uttamanga, Nose is the shortest and convenient route. As the anatomical structures present in the Nose and Nasal cavity having some special features which are helpful in Nasal medications such as; it absorbs drug rapidly, it crosses blood-brain barrier. Hence, it proves that 'Nasa Hi Sirso Dwaram.'

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