



Review Article

DOI: <https://doi.org/10.30750/ijpbr.7.1.2>Concept of *Sharir* in *Nasya Karma*

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ABSTRACT

Nasya is one of the most important *Panchakarma* procedures done in *Ayurveda*. It is mostly done for the *Urdhwajatrugata Vikara*. The drug has effects on the central nervous system also. Hence, it is important to elaborate on the concept of *Sharir* according to *Ayurveda* and modern medical science to understand this drug delivery route. *Nasya* gives the drug mainly gets absorbed by capillaries in the nasal mucosa and also crosses the blood-brain barrier (BBB) as mostly the drug is prepared in the form of *sneha*. This article will explain the *sharir* concept related to the *nasya* procedure.

INTRODUCTION

ऊर्ध्वजत्रुविकारेषु विशेषान्नस्यमिष्यते ।
नासा हि शिरसो द्वारं तेन तद्वाप्य हन्ति तान् ॥ - (अ.ह.सु.
२०/१)

Nasya is the major panchakarma process in all types of *urthwajatrugata vikara*. It is also coated that “Nasa hi sirso dwaram”. [1] This paper is an attempt to prove that why *Nasa* is called “*sirasodwaram*”.

The brain is an important vital organ protected in brain box. It controls all functions of the body. So brain deformities can occur effect the particular part or particular function of the body. To cure that deformity the procedure of *nasya karma* is described in *samhitas*. Most of *nasya karma* is in the form of *grita* or *taila* rather than *swarasa*, *quath*, and *churna*.

When *nasya karma* is done in the proper position, the respiratory mucosa, which is present in the lower part of nose consists of a huge network of blood vessels and capillaries. Due to *purva karma* i.e., localized *snehana* and *swedana*, the vessels are dilated and increase the absorption capacity of localized vessels and permits the entry of maximum alkaloids in systemic blood. Through the circulation, it reaches to blood vessels of the brain.

The role of Blood-brain barrier (BBB) in CNS is very important. It protects the brain from toxic substances soluble

in blood and allows lipid soluble drug entry in CNS. Some large molecules, drugs, inorganic ions, and amino acid passes slowly from blood to CNS.

BBB is formed by astrocytes, which are a neuroglial type of cells found in large numbers adjacent to blood capillaries in CNS with their foot process around them. The blood separated from the capillary wall (endothelial cells) and the layer of astrocytes foot process form sleeves around them, which together constitute BBB. It regulates the transport of molecules and cells into and out of CNS. It also controls the volume and composition of fluid surrounding the brain (Figures 1 and 2).

Cellular components of the BBB

Principal components

are:

- Endothelial cells
- Astrocytes
- Pericytes

- Other cellular components like neurons and microglia also play significant role (immune function)

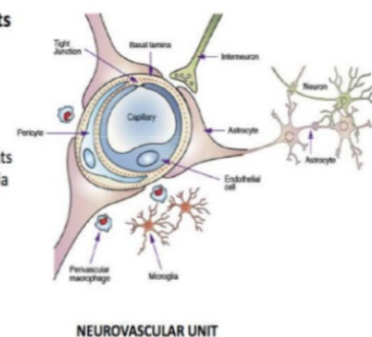


Figure 1: Cellular components of the BBB

Anatomical site of the blood-brain barrier (BBB)

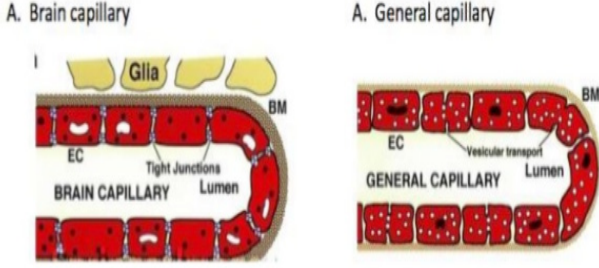


Figure 2: Anatomical site of the blood-brain (BBB)

There are three types of *nasya* described in *Samhitas*, i.e., *snehana*, *shodhana* and *shaman*.

यथास्वं यौगिकैः सौहार्दयथास्वञ्च प्रमादितैः । - (अ. ह. सु. २०/५)

All these *Nasya aushadhi* is prepared by *sneha kalpana* and administered through the nose during *Nasya* procedures. While making *sneha kalpana* either a *grit* or *taila*, with *quath* and the *kalka* or *swaraas* of herbal drug is used. The lipid-soluble part of this herbal drug enter in *grit* or *taila* and acts as an active ingredient of that *grit* or *taila*. When these *grit* or *taila* is used for *nasya karma* this lipid-soluble active ingredient enters in capillary network of the nasal mucosa, and being lipid-soluble, it can also enter in CNS as explained in BB. This active ingredient then BACT in CNS and gives the effectiveness of *nasyakarma*. [2]

According to modern, these drugs causes chemical modification of drugs such as increasing their lipophilicity

and turn them more prone to be internalized in their brain to make as a neuroactive drug. Such a drug consists of immunoglobulins, liposomes, or other mono particles or nano particals that will act as a trogen horse, fauring the drug delivered in the brain. Anu taila is the best example of *snehapaka* used for *snehakalpana*. [3]

विपाचयेच्छतगुणे माहेन्द्रे विमलेऽम्भसि ।

तैलाद्दशगुणं शेषं कषायमवतारयेत् ॥

तेन तैलं कषायेण दशकृत्वो विपाचयेत् ।

अथास्य दशमे पाके समांशं द्वागलं पयः ॥

दद्यादेषोऽणुतैलस्य नावनीयस्य संविधिः ।

तैलमेतत् त्रिदोषघ्नमिन्द्रियाणां बलप्रदम् ॥ - (च. सु. ५/ ६६-७०)

It is done by *Dasha Pak vidhi*. During each *Paka agni samskar* is done, which brings *sukshmatva* in the drugs. Hence it is known as *anu(suksma) taila*. This may be change in partical size into micros such as a nano partical which will be easily absorbed in CNS and brings about the target function. Hence from all the above discussion, we can conclude that *Nasa hi sirasodwaram*.

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