

Review Article

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## CONCEPT OF MANAS W.S.R. TO ANATOMICAL CONSIDERATION OF NERVOUS SYSTEM ACCORDING TO AYURVEDA

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### Abstract

Ayurveda presented various aspects related to the different system of body in this regards Ayurveda philosopher advocated various perspective related to the nervous system. *Sushruta* and other pioneers of ancient science mainly focused on physiological aspects of nervous system instead of structural details. The function of brain mainly governs through the *Vata*, *Panca Mahabhuta* and *Tri-Guna* according to Ayurveda. The neural impulses, motor activity, sensory activity and other integrative functions of brain mainly govern the *Vata*. *Panca Mahabhuta* play role in the constitutional composition of brain and *Tri-Guna* decides inherent mental and behavioral characteristics of particular types of brain. This article presented concept of *Manas W.S.R.* to anatomical consideration of physiological and anatomical aspects of brain.

**Key-Words:** *Ayurveda, Manas, Brain, Nervous System, Vata, Anatomy*

## Introduction

The anatomical aspect of nervous system encompasses descriptions of various parts including brain, nerves and spinal cord, etc. The physiological aspect involves activities like generation of nerve impulses, transmission, stimulation of various body parts and motor functions, etc. Various anatomical parts play crucial roles in the functioning of brain, these includes *Sira*, *Vatavaha Sira*, *Dhamani*, *Srotas*, *Snayu*, *Nadi*, *Marma Hridaya* and *Shira*. These structures are components of nervous system which support functioning of brain. Modern since also described various anatomical parts of brain which includes central, peripheral and autonomic nervous systems, etc [1-4].

*Vata* is originating within the *Nadis* or *Srotas*, possess qualities like pervasiveness, quick action, invisibility and motility, etc. *Vata* helps to regulates all bodily functions, control sensory perceptions and maintaining equilibrium in humor and tissues, etc. The brain known as *Mastishka* mainly contain *Shira* as anatomical part that represents all compositions of brain. It also described as *Manava Rajadhani* as the ruler of body. It offers qualities such as; *Amurta*, *Anavasthita/Calatva*) and *Svayambhu*. These all qualities are associated with *Vata*, therefore *Vata* mainly govern functioning of *Manas*. *Mastishka* along with *Vata* performs functioning of *Gati* and *Gandhana*.

Anatomically head is referred to *Shiras* that holds a place for neuro-physio-anatomy. In Ayurveda *Shira* recognized as housing of brain, termed as *Mastulungam* where the life-binding force *Prana* resides and serves as the force of energy and life. It manages sensory and motor functions and considered as seat of *Vata Dosha*. Ayurveda texts considered head as root of body that situated on the top that regulates all other branches of body means other parts of body [4-6].

*Charaka* described human nervous system in the form of anatomical structure as head, considering it as vital organs, that housing sensory faculties. *Shira* denotes brain that support cognitive and motor function of mind. *Charaka* delineates *Pranayatana* numbering ten and put head as vital part in life functions and sensory perception. *Sushruta* acknowledged the fatty material within the skull as *Mastulunga* that can be correlated to

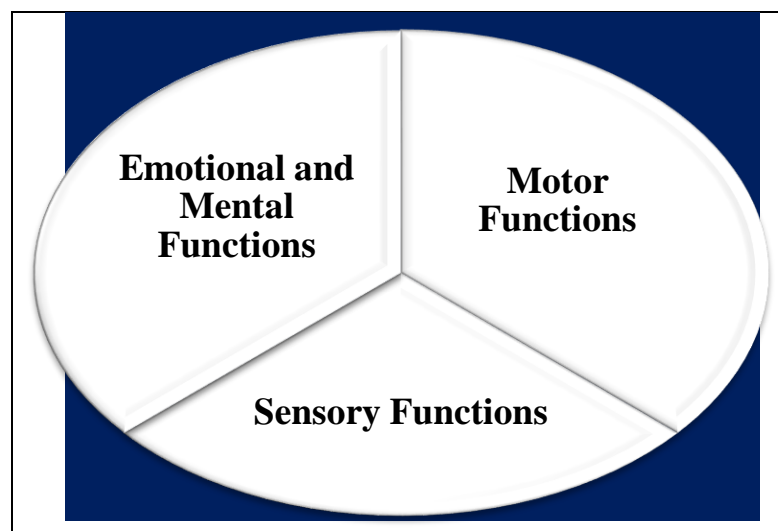
brain of modern terminology. *Dalhana's* commentary suggested *Mastulunga* as akin to solidified *ghee* that gives strength to the head.

*Cakrapani* defines *Mastishka* as fatty substance within the skull that serve as main part of human nervous system. *Charaka* suggested connection of brain through nostril and in this regards he outlined concept of *Avapida Nasya* in which nasal drop can be sent to brain through the nostril.

The *Atharvaveda* suggested that *Vata* is located in the upper part of *Mastishka*, thus controlling bodily functions. *Vata* along with *Prana Vayu* governs the functioning of nervous system. The *Shiras* houses *Mastishka* which characterized by *Snigdha* nature, brain contains lipids and proteins, lipids present in the form of myelinated fibers and nerve proteins found in the form of mucoproteins.

Excitation in nerve fibers is response for stimuli which further results some action potentials. The *Anavasthita* property of *Vata Dosha* play important role here. During stimuli generation impulse travels with nerve fiber, leading to the sensations and movements. Impulse acts as *Avyakta* related with *Vyakta-Karma* and akin to the *Avyakovyakta-Karma* [6-8].

Neurons generate and transmit impulses therefore they possess character of *Svayambhu* means self-originating and controls all other functions of body which includes three major types of activities as depicted in **Figure 1**.



**Figure 1: Major functioning of nervous system**

### 1. Emotional and Mental Functions

- ✚ Enthusiasm (*Utsaha*) and Joy (*Harsha*)
- ✚ Directing the mind away from undesirable stimuli and toward desirable ones.

### 2. Motor Functions

- ✚ Skeletal muscle activity
- ✚ Involuntary muscle actions
- ✚ Secretory functions

### 3. Sensory Functions

- ✚ *Vata's* role in stimulating all sensations.
- ✚ Transformation of sensory impressions into nerve impulses, transmitted through *Sanjnavaha Srotas* via *Manas* to the respective *Indriya Buddhi*.

As mentioned above the nervous system also performs activities related to the integration of motor and sensory functions. Similarly biochemical functions include activities like *Dhatuvyuhakara* which involve synthesis of *Dhatus* from nutrients in *Rasadhatu* based on body requirements.

*Majja Dhātu* refers to the bone marrow which nourishes brain and responsible for constitution of mental attributes. *Majja Dhātu* oversees brain functions; contribute to physical attributes, bone health and strength. *Majja Dhātu* play a role in supporting aspects of the nervous system therefore it is considered as one of the *Dhātu* related to the brain.

Ayurveda categorizes consciousness into three major qualities known as the *Sattva*, *Rajas*, and *Tamas*. These *Gunas* are believed to permeate all aspects of existence, including food, experiences and overall consciousness.

- ✓ ***Sattva***: This quality represents purity, balance, harmony, and goodness. It is associated with clarity of mind, wisdom, compassion, love, and understanding. Foods that are fresh, natural, and pure are said to be *Sattvic* and promote mental clarity and spiritual growth. Practices like meditation, *Yoga*, and spending time in nature are also considered *Sattvic* as they promote inner peace and tranquility.

- ✓ **Rajas:** *Rajas* is the quality of activity, motion, passion, and desire. It is associated with ambition, restlessness, excitement, and the drive to achieve goals. Foods that are spicy, stimulating, and energizing are considered *Rajasic*. While *Rajas* can fuel productivity and action, an excess of this quality can lead to stress, agitation, and imbalance in the mind.
- ✓ **Tamas:** *Tamas* represents inertia, darkness, lethargy, and ignorance. It is associated with heaviness, dullness, and a lack of motivation. Foods that are processed, heavy, and difficult to digest are considered *Tamasic*. *Tamas* is necessary for rest, relaxation, and sleep, but an excess of *Tamas* can lead to laziness, depression, and a lack of clarity.

Ayurveda emphasizes the importance of cultivating *Sattva* for optimal psycho-spiritual health. *Sattvic* qualities promote mental clarity, compassion, and spiritual growth, leading towards liberation and enlightenment. Imbalances in *Rajas* or *Tamas* are often associated with mental disturbances [8-11].

## Conclusion

The ancient scholars focused more on the functional aspects rather than the structural details of the nervous system. They attributed *Vata* as major *Dosha* amongst *Tridoshas* related with the function of brain. *Mastishka* and *Vatavaha Srotas* are crucial for *Gati* and *Gandana*. The qualities associated with *Vata*, such as *Amurta*, *Anavasthita/Calatva*, *Svayambhu* and *Sukshma* suggest correlation of *Vata* with nerve impulses. The head is referred as "*Shiras*," it plays a crucial role in neurophysioanatomy. It houses the brain, which is responsible for various functions related to energy, life, sensory perception and motor functions. Head also termed as "*Mastulungam*," where the life-binding force called "*Prana*" resides. The head, being the location of *Prana*, is essential for managing sensory and motor functions.

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