

## AN ANATOMICAL ASSOCIATION OF *ARDITA ROGA* IN RELATION TO *VATAVYADHI* AS PER CLASSICAL LITERATURE

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### ABSTRACT

In *Ayurvedic* science, the *Tridosha* theory is the foundation root & cause for everything happening in the body and universe. *Vata* is one of the important *Dosha*, which is prime driving force for other two *Doshas* (*Pitta* & *Kapha*), *Dhatus* (body tissues) and *Malas* (excreta) from one site to the other. *Vatavyadhi* are included under the *Mahagadas* (an extreme disease) as they have complicated conglomeration of signs and symptoms. In the normal state it controls the mind and body activities but on affliction it happens to be the worst cause for bodily damage and occurrence of diseases. It becomes morbid (factor for diseases) due to its vitiation due to external and internal environmental factors. This work is a review on *Ardita Roga* from classical literature along with the modern science pathogenesis. A relation between the *Lakshanas* and the pathogenesis with sign-symptom is compiled.

**Keywords:** *Ardita*, *Vatavyadhi*, Neurons, Paralysis, *Vakrata*, Cranial nerves

### INTRODUCTION

*Vata* is the main element of the body which helps in controlling, maintaining, formation for various bodily activities and compounds. Many *Acharyas* have given the references for *Vatavyadhi* in their *Samhitas* which can be compared on the anatomical aspect for the betterment of understanding the classical text. The word *Vatavyadhi* itself indicates the meaning of diseases caused due to *Vata* and term *Vyadhi* is (condition where the affliction occurs in localized or generalized form)<sup>(1)</sup>. Each disease has an anatomical –physiological aspect where the anatomical changes affect the morphology of the structure and altered physiology is the cause for the pathogenesis. The word meaning of *Ardita* is “the condition

caused due to unusual *Vata* vitiation, which turns face in an opposite direction.<sup>(2)</sup> The word *Ardita* come along with other word meaning like injured, affliction and spasms for facial region<sup>(3)</sup>. The text from the *Brihattyrees* (*Sushruta Samhita*, *Charaka Samhita* & *Asthanga*) has demonstrated the concept of *VataVyadhi* with many diseases highlighted by means of their signs-symptoms. This works is confined to the correlation of *Ardita Roga* with the facial nerve affliction.

#### IN AYURVEDIC LITERATURE:

The chapter titled “*Vatavyadhi*” comprises of several diseases like *Gritharsi* (sciatica), *Vatakantaka*, *Urusthambha*, *Dandaka*, *Ardita* (facial palsy),

*Hanusthambha* (temporo-mandibular affliction), *Dhanuskampa* (convulsions), *Bhadirya* (deafness) etc. & here *Ardita* is described. The disease is related to *Mukhasamkocha* (constriction of facial muscles), *Vakrata* (deviation) of facial parts like nose, eyes, eyebrows etc.

In *Charaka Samhita*, the chapter titled “*Vata Vyadhi*” *Acharya* has mentioned *Ardita Roga*. The provoked *Vata* affects one side of body, it dries up blood, hand, leg, and knee and there is contraction of the side. Along with this, eye, nose, eyebrows, jaws gets crooked. Thus, the opening of the mouth goes in crooked manner, difficulty in having food, tongue becomes curved when raised, nose gets deviated, and hearing and speech is affected<sup>(4)</sup>. The vitiated *Vata* affects half side of the body/ face and recognizable features (mostly on facial region) are observed externally on the patients. The disease is diagnosed with the one-sided or half side of the body. Similarly, in *Sushruta Samhita*<sup>(5)</sup> and *Ashtang Sangrah*<sup>(6)</sup>, *VataVyadhi Nidanam* describes the factors for afflicted *Vata* and comparable signs – symptoms. *Acharya Sushruta* has mentioned the causes for manifestation of disease like due to *Raktashyaya* (lack of blood), *Bharavahna* (heavy objects over head) afflicts *Vata*<sup>(7)</sup>. In *Ashtang Hridaya*, they have used the term ‘*Ekayama*’ (related to one sided affliction)<sup>(8)</sup>. According to *Bhavamishra & Yogratanakar*<sup>(9)</sup>, there are 3 types of *Ardita* based upon the *Doshas*.

- *Vata Ardita*: excessive salivation, pain, lock jaw, edema over lips
- *Pitta Ardita*: thirst, yellowish color of face, *Daha, Jwara* (fever)
- *Kapha Ardita*: edema & stiffness in neck

**Table 1.1:** Enlisting the Facial Nerve Innervation

| Sensory Root                    | Motor Root           | Parasympathetic Root                                     |
|---------------------------------|----------------------|--|
| Innervation for taste sensation | Somatic innervations | Secretions of glands Lacrimal, sublingual, submandibular |

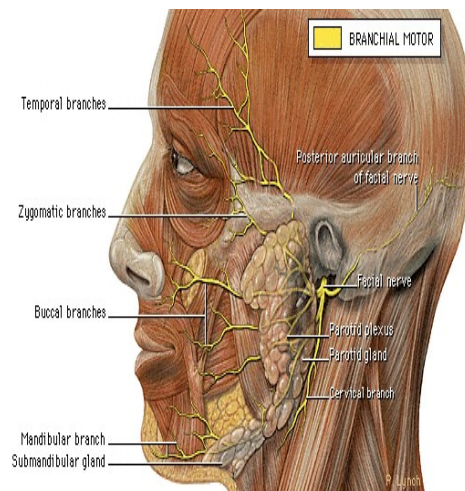
## DISCUSSION & CONCLUSION

From the above textual matter from *Ayurvedic* science it is clear that *Vata Dosha* is prime cause for

## IN MODERN SCIENCE:

The facial nerve emerges from base of skull at stylo-mastoid foramen. It gains access to face while passing from the parotid gland. Near this foramen the nerve gives a posterior auricular nerve and within the substance of gland it divides into temporo-facial and cervico-facial trunks. The trunk further forms a plexuses and gives five branches<sup>(10)</sup>.

- ✓ Temporal branch
- ✓ Zygomatic branch
- ✓ Buccal branch
- ✓ Mandibular branch
- ✓ Cervical branch



**Figure 1.1:** The Course & Branches of Facial Nerve  
It is the most frequently paralyzed cranial nerve. Depending on location of lesion different symptoms occur. A lesion of CN VII near its origin, or geniculate ganglion will accompanied by loss of motor, gustatory (taste) and autonomic functions<sup>(11)</sup>. The facial nerve is a mixed type of nerve and its innervations are as follows enlisted in the table.

such *Lakshanas*. The weight bearing over head region, screaming, constant yawning, day sleep, hit by external stimuli, suppression of natural urges (sneez-

ing, lacrimation, yawning) etc. produces such symptoms in *Ardita*, *Shirashoola* (pain), *Murdhakampa* (tremors), *netrasabdta* (stiff eye movements), *Akshishoola* (pain around eye region), *Ashrusrava* (lacrimation), *Nasavakrta* (nasal deviation), *Gandha agyana* (loss of smell), *Mukha-Jiwhavakrta* (deviated mouth and tongue)<sup>(12)</sup>. So, the *Samprapti* (pathogenesis) indicates that these factors aggravate the *Vata* and it gets occluded in the nearby vessels & nerves situated in the region and turns it one side<sup>(13)</sup>. The correlation between the two sciences is similar easily in concept and to understand classical views we need modern parameters. There is group of comparable symptoms like tremors in head- face, deviation, lacrimation, and eyelids drooping on affected side, loss of smell, taste, and inability to speak. Facial nerve paralysis may be due to an upper motor neuron lesion, or a lower motor neuron lesion. Bell's palsy and acoustic neuromas can produce a complete lower motor neuron facial paralysis<sup>(14)</sup>. The involvement of different cranial nerves as facial nerve, auditory, glossopharyngeal optic, oculomotor, fibres of trigeminal and vagus nerves lead to these presentations of signs-symptoms.

The modern anatomical facts reveal that, the facial nerve paralysis may be supra nuclear or infra nuclear one. The nerve fibres consist of 2 motor nuclei. The dorsal division is the one which contains UMN's (upper motor neuron) which receives bilateral input from brain<sup>(15)</sup>. The ventral division contains LMN's (lower motor neuron) which receives only contralateral inputs. The supra nuclear facial paralysis involves the UMN pathway & usually part of hemiplegia. The infra nuclear one is related with point where the nerve can be injured (site of lesion)<sup>(16)</sup>.

- Lesion in Pons: Damage to many other nuclei (Abducens, spinal trigeminal, sensory )
- Lesion in Internal Acoustic Meatus: Loss of taste, deafness, facial paralysis
- Lesion in Facial Canal: Results in sensitivity to one ear (hyperacusis)
- Lesion Petrous Bone: Chorda tympani is involved

It is caused due to inflammation of the facial nerve near the stylomastoid foramen or due to compression of the fibers. Thus, the nerve must be protected from the harsh external environmental source to prevent from such conditions. Here it can be concluded that *Vata* must be controlled by introducing changes in dietary habits & lifestyle pattern, so that its affliction can be prevented. Different types of treatment is available in Ayurveda for *Ardita* or Facial Paralysis as it is a disease of *Vata Dosha*, so *Snehana* (oiling with medicated oils) and *Swedana* (fomentation/ steam) can be done along with other medicinal preparations.

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