

## UNDERSTANDING ARDITA WSR TO FACIAL PALSY

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## ABSTRACT

*Ardita* is a disease causing the *vakratha* (deviation) of *mukha ardha* (half of the face) **Facial nerve paralysis** is the condition which presents with the deviation of half of the face and associated with the impairment of motor and sensory functions of the affected side of the face. Facial paralysis can be placed under the wide Spectrum of the *Ardita vyadhi*, which is described in *Ayurvedic* classics. For the better understanding of the underlying pathology of the disease, an overview from the angle of modern science would be helpful. In this paper an attempt has made to understand *Ardita* with respect to facial palsy.

**Keywords:** *Ardita*, facial paralysis, *vata vyadhi*

## INTRODUCTION

Face is the mirror of the mind, which conveys the emotions like happiness, sadness, anger, disgust, fear and so on.. These motor and sensory functions are co-coordinated and controlled from the epitome the head, which is considered as “*Uttamanga*”.

Man is recognized with his demeanour and skill of communication with the verbal statements. The disability of the both verbal communication and facial expressions are hampered in *Ardita*, a *Vata Vyadhi* which is more common in the present day scenario due to exposure to cold, wind

*Ardita* is considered as one among the 80 *Vataja nanatmaja Vyadhi* by *Acharya charaka*<sup>1</sup>, also as a “*Shiro Roga*” as the *Shiras* is the *Adhistana*. Hence *Ardita* is also considered as *Shiro roga*. It is considered under *Asthi Majjagata Vata* in *bhela samhitha*<sup>2</sup>. *chalathwa* (movement) characteristically qualifies the living, achieved by the virtue of *Vibhu Vata*<sup>3</sup>. When vata in its abnormal state leads to dreadful conditions, such as human body fails to func-

tion or becomes deformed and even causes death<sup>4</sup>. *Ardita*, a *Vata Vyadhi*, where the sense organs which differentiates living and non-living are impaired and responsible for the interaction between the living and its environment is ceased. *Vata* is the prime element which is responsible for conveying all senses from the sense organs.<sup>5</sup> The functions of sense organs are impaired in *Ardita*, hence *Ardita* can be considered as a *vikruthi* of indriyas also, which are governed by the omni present-*Vata*. *Ardita*<sup>6</sup> with special reference to facial palsy<sup>7</sup>, is a disease affecting all ages and its the need of the hour to curb the disease through effective treatment. No effective treatment has been highlighted by the contemporary science for this crippling disease. . By the virtue of targeting the dosha involved and there by curing the disease through *Ayurveda* serves as the successful key tool.

**Etymology of the word “Ardita”**

The word *Ardita* usually indicates a person afflicted or troubled according to *shabda-*

*kalpadruma*. According to *Ayurveda* it is explained as a specific disease afflicting the *Urdhavanga (Jatrordhwa)* parts above the neck, particularly the face<sup>8</sup>. *Ardita* is a type of *Vataja nanatmaja Vyadhi*<sup>9</sup>, manifesting with the loss of functions involving one half of the face alone or half of the face along with half of the body.

The word *Ardita* is derived from the root word "*Ardana*" which means to pain, or discomfort or trouble. According to *Amarakosha* a Sanskrit dictionary<sup>10</sup> meanings like begging, torturing, hurting, has been given.

### Definitions of Ardita

All Acharyas have considered the face is the primary part in *Ardita* which is getting afflicted by vata.

- *Charaka Acharya* opines that this disease is localized in half of the face with or without the involvement of the body<sup>11</sup>
- According to *Acharya Susruta*, the *Vata* vitiated gets localised in the half of the face<sup>12</sup> (mouth and other regions of the head)
- *Vagbhata* followed the opinion of *charaka acharya*, stating that half of the face is getting distorted along with or without the involvement of half of the body<sup>14</sup>.
- *Arunadatta* has clarified that *Ardita* is the disease of the body mostly affecting half of the face<sup>15</sup>.
- According to *Sharangadhara Samhita*<sup>16</sup> has quoted that *Ardita* is the condition which is affecting half of the face.

### PARALYSIS

The word "paralysis" or palsy implies an abnormal condition characterized by the loss of motor functions or the loss of sensation or both.<sup>17</sup> Paralysis is impairment or loss of especially the motor function of

the nerves, causing disability to move or weakness of the affected part.

### FACIAL NERVE

Facial paralysis is due to the lesion of the pyramidal tract between the cortex and the middle of the Pons (upper motor neuron paralysis), the nucleus and the seventh cranial nerve (lower motor neuron paralysis).

Facial paralysis can manifested by two kinds of lesions i.e., Supra-nuclear and infra nuclear lesions.

1) A supra-nuclear lesion in the cerebrum or upper brain stem called as central facial palsy(upper motor neuron lesion)

2) A lesion involving either the nucleus or the facial nerve peripheral to the nucleus termed as peripheral facial palsy(lower motor neuron lesion)

- UMN lesion –lower part of face is affected as Upper half of face is controlled by pathways from both sides of cortex(bilateral representation) Since,lower half of face has ipsilateral representation,hence Left hemispheric damage paralyses the right lower face.

### Central facial paralysis

- Causes paralysis of only the lower half of the face on the contra lateral side.
- Forehead movements are retained.
- Emotional movements are retained.

### Peripheral facial paralysis

- Paralysis of all muscles of face on the involved side.
- Unable to frown, close the eye, purse the lips, whistle.

### Nidana of Ardita

*Acharya Charaka* has quoted *vata vyadhi nidana* as the *nidana* of *arditha* and also mentioned specific *Nidana* at *Shiroroga adhyaya* in *sidhi sthana*<sup>18</sup> which can also considered as *Ardita Nidana* as the *Shiras* is the *Adhistana* of the *vyadhiArdita*. In the context of *Navegandharaneeya adhyaya*<sup>19</sup> *Charaka* has mentioned *Ardita* as one

among the complications arising due to suppression of the urge of sneeze.

*Vagbhatacharya* and *Acharya susrutha* mentioned the specific *nidanas* for the *arditha* disease.

Both *Susruta*<sup>20</sup> and *Vagbhata*<sup>21</sup> have enumerated the causes of *Ardita*<sup>22</sup>

- Speaking loudly in excess, Churning hard food stuffs, Excessive laughter, yawning and sneezing, Carrying heavy loads on head, Sudden movement of head and neck, Sleeping in an uncomfortable posture, Use of pillows in wrong posture; either too high or too low etc.

*Acharya Susruta* added auxiliary points that, following *Rakta Kshaya*, (depletion of blood) in specific group of patients get afflicted by *Ardita*:

- Pregnant lady, Recently delivered lady, Children, Old people, Emaciated persons

*Vagbhata* explained *Ardita* is a disease, due to the vitiation of *Pranavata*<sup>23</sup>, *Yogaratanakara* further contributed some more verses are as follows.

- Following an injury, by doing day sleep excessively, Excessive tongue scraping, *Siravyadhana* (if done improperly), Injury to the *Marma* (vital points in the head), Excessive rubbing of the eyes, ears and nose, by consuming alcohol, *asavas* in excess etc.

The *poorvarupa* (premonitory symptoms) of *Ardita* described by *susrutha*<sup>24</sup> is as follows :

- *Romaharsha* (horripilation) *Vepanam* (Tremors) *Avila Netrata* (blurred vision) *Twachi swapa* (loss of sensation of skin), *Toda* (pain), *Manya sthamba* (stiffness of the neck) *Hanugraha* (stiffness of the jaw)

### Roopa

The signs and symptoms mentioned in different *Ayurvedic* classics are:

- Distortion of the affected side of the face (the mouth angle is drawn over to the opposite side), If the patient tries to laugh, the mouth angle is drawn to the normal side, tremors of the head and shaking of tooth, incomplete closure of the eye affected. Distortion of the nose, Difficulty in speech and hoarseness of voice, hearing loss and impairment in smell sensation and pain in the ear also, The act of mastication and swallowing of food gets troubled Sneeze gets suppressed, Severe pain in neck, chin, teeth, on the affected side, getting fear while sleeping and sometimes Loss of memory also.

*Acharya Charaka* has described symptoms of *pakshaghatha* also under the disease state *Ardita*<sup>25</sup>, only those symptoms pertaining due to the facial palsy are given below.

- The food ingested could not swallowed properly, it gets collected in the vestibule part of the mouth, While laughing, speaking etc, the face gets deviated or distorted to the normal side.
- sneeze gets suppressed, Speech becomes slurred, feeble, with hoarseness of voice, asymmetry of the face, eyebrows, forehead, eye and chin.

### CAUSES OF FACIAL PARALYSIS:

1. Upper motor neuron lesions- (Lesions of pyramidal tract between cortex and middle of pons)

- Cerebro Vascular accidents
- Trauma
- cerebral tumours

2. Lower motor neuron lesions- (Peripheral)

- Middle ear infections
- Parotid malignancies and infections
- Bell's palsy
- Trauma

### Bell's palsy:

Bell's palsy is defined as the facial paralysis of acute onset presumed to be due to inflammation of the facial nerve within its canal above the stylomastoid foramen.

The features of Bell's palsy are:

- Usually unilateral, rarely bilateral, Pain within ear or mastoid region or chin.
- Onset is sudden or abruptly happens
- Paralysis of the muscles of facial expression. The upper and lower facial muscles are equally affected and voluntary emotional & associated movements are involved.
- Eyelid droops, unable to frown and eyebrow rising is impossible, unable to close eyes completely. When the patient attempts to close the eye, the ball rolls upwards and outwards called as Bell's phenomenon.
- Impairment in lacrimal pump mechanism due to lack of blinking is the prime cause for epiphora or increased lacrimation.
- Absence of Nasolabial fold
- If lesion is in the middle ear portion: taste is lost over the ant.2/3<sup>rd</sup> of the tongue on the same side
- If the nerve to stapedius is interrupted Hyperacusis -high pitched sounds appears louder than normal
- Lesions in the internal auditory meatus – affect the auditory & vestibular nerves causes deafness and Tinnitus

### SAMPRAPTI OF ARDITA

The *Vata* vitiated by the respective causative factors, gets localised in the regions of head, nose, chin, forehead and the eyes and manifests as the disease called “*Ardita*”.

The symptom of *vaksanga* indicates that the vitiated *Vata* affects the tongue also *Vagbhata* has indicated the affliction of the ear on the affected side .As per *Charaka*, the vitiated *Vata* while settling in the above stated regions in the head and results in the “*Soshana*” of the “*Rakta*” *Dhatu* resulting in *Ardita*. *soshana* of rakta can be taken as the reduction in the supply of *Rakta* to that particular region affecting the normal physiological functions due to any cerebro vascular accidents like embolism, hemorrhage, ischemia etc.

### SAMPRAPTHI GHATAKAS:

- *DOSHA: Prana, udana ,vyana vata*
- *DUSHYAS: rakta,medas*
- *SROTAS: medovaha, raktavaha, samjna vaha*
- *SROTODUSHTI : sanga, vimargagamana*
- *UDBHAVA STHAANA : pakwashaya*
- *ADISHTAANA : Siras ,indriyas*
- *SANCHARA STHAANA: Rasayani*
- *VYAKTHA STHAANA : Mukhaardha,*
- *ROGA MARGA: Madhyama*

TABLE NO:01 LAKSHANAS	CRANIAL NERVE INVOLVED
Deviation of half of the face, nose, eyebrow, fore head and chin, escape of food and fluids from the angle of the mouth, incomplete closure of the eye ( <i>vakreekarothi vaktrardham naasa broo</i> )	Facial nerve
Difficulty in hearing and pain in the ear ( <i>bhadhyethe sravanou</i> )	Auditory nerve
Feeble Speech, hoarseness of voice ,difficulty in swallowing ( <i>deena vaak,vaktram bhojanam vrajathi</i> )	Glossopharyngeal and vagus nerve
Defects in vision due to drooping of eyelids ( <i>nethradeenam vaikrutham</i> )	Optic nerve

fixed gaze ( <i>sthabda nethratha</i> )	Occulomotor, trochlear, Abducent
Loss of sensation of face, pain in eye,ear,cheeks,jaw	Trigeminal nerve
Weakness of neck ( <i>greevapavarthanam</i> )	Accessory nerve
Slurred speech ( <i>avyaktha bhashina</i> )	Hypoglossal nerve

**Sadhya-Asadhyata of Ardita**

If *Ardita* is present in patients who are *ksheena* (debilitated), *animeshaksha* (unable to close the eyes), *avyakta bhashina* (with slurred speech), *trivarsha* and *vepana* (tremors). *Trivarsha* (3years chronicity) or discharge from mouth, eyes and nose.

Spectrum of *vata vyadhies* which includes *Ardita* can be cured effectively if the patient is *balavan* and if the disease is developed recently.

**CHIKTHSA OF ARDITHA**

All the classics have described the treatment protocol for *arditha* more or less same,as follows:

- *Moordha taila* (application of oil)to the head, *Nasya karma*, *Tarpana Kriya* with medicated oil to the eyes and ears, *Nadi Sweda*, *Upanaha Sweda* has to be administered.

**Line of treatment in Susrutha samhita.**

- *Matishkyam,Shirovasti,Dhoomapana,Sn ehana-* according to the *Dosha* involved.
- *Vagbhatacharya* in addition, recommended two more modes of treatments based on the *Dosha* involved.
  1. *Kapha* - If associated with *sopha* (inflammation), *Vamana* has to be administered.
  2. *Pitta* - If associated with *daha* and (burning sensation), *siravyadha* is recommended.
    - In case of *maargavarana janya ardita*, at first *avarna* line of treatment has to be followed thereafter the treatment of *kevala vata* has to be followed.

**EFFECTIVE FORMULATIONS IN ARDITHA (TABLENO:2)**

<b>Kashayas</b>	<b>Tailas</b>	<b>Other prayogas</b>
<ul style="list-style-type: none"> <li>▪ <i>Dhanadanayanadi kashaya (sy)</i></li> <li>▪ <i>Maharasnadi kashaya(sy) (B.Rat)</i></li> <li>▪ <i>Rasna dashamooladi kwatha (B.Rat)</i></li> <li>▪ <i>Mashabaladi kwatha(B.Rat)</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Masha taila(b.rat)</i></li> <li>• <i>Mashadi taila(b.p)</i></li> <li>• <i>Mashabaladi taila</i></li> <li>• <i>Karpasastyadi taila</i></li> <li>• <i>Dhanwantharam taila</i></li> <li>• <i>Mahamashataila (b.rat,cha.dutta,b.p)</i></li> <li>• <i>Kshirabala taila</i></li> </ul>	<p><i>Rasona pinda</i> <i>Mashendari prayoga</i> <i>Navaneetha +lasuna</i></p>

**DISCUSSION**

*Ardita* is a broad spectrum disease in which facial paralysis can be considered as one of the condition. *Susruthaacharya's* description about *arditha* holds more apt while we co-relate *ardita* with the condition of facial palsy; Whereas *Acharya*

*charaka* and *vagbhata* considered the involvement of the body also in *ardita* .

Analysing both ayurvedic and modern views,*Ardita* can be compared to Facial palsy of lower motor neuron type /infra nuclear type more accurately.Bell's palsy the common type of LMN facial nerve paralysis.The various manifestations of facial nerve lesions at different sites has

been mentioned as lakshanas of ardita clearly by our Acharyas years back.

## CONCLUSION

The features of *Ardita* as per *Ayurveda* in modern parlance suggest the involvement of all cranial nerves as one or the other feature of their damage is present as a *lakshana* in *Ardita*. Also, the involvement of facial nerve is very obvious as it manifests with more number of symptoms than any other cranial nerve. This is the reason why the *Ardita* is frequently compared to facial nerve palsy even though unilateral involvement of all the cranial nerves is seen.

“*Vatasyopakrama sneha sweda...*” is the quotation that which is highlighting about the primacy of *sneha Dravya* in the treatment aspects of *Vata Vyadhi* and it holds good *Ardita* also. Depending on *adhistana* various modes of administration of *sneha dravyas* is explained in our classics such as *nasya*, *moordhni taila* etc which has got a edge over the other treatment methods in contemporary science. Physicians who are very keen and wise with their logic can choose the various medicines prescribed in our classics and thereby can provide a better quality of life to this disease afflicted individuals.

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#### ACKNOWLEDGEMENTS

- Dr. KiranM.Goud, Principal
- Dr. Anjaneya Murthy, Dean of PG Studies
- Dr. Baidyanath Mishra, Deputy Dean of PG Studies
- Dr. Byresh.A. Professor, Department of PG Studies in Kayachikitsa,
- Faculty, Sri Kalabyraveshwara Ayurveda Medical College, Hospital and Research Centre, Bangalore.

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*Source of support: Nil*  
*Conflict of interest: None Declared*