



## Case Study

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### EFFECT OF ANU TAIL NASYA IN MANAGEMENT OF ARDIT WITH SPECIAL REFERENCE TO BELLS Palsy POST HERPES SIMPLEX VIRUS INFECTION: A CASE STUDY

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#### ABSTRACT

In the modern era, when the whole world is developing and adapting to a new lifestyle, everyone has forgotten about personal health due to the contemporary lifestyle, Stress and increasing anxiety about work. Nowadays, we have seen an increased number of viral diseases which are very difficult to treat. These viral diseases act on the body due to reduced immunity of people, which is again due to day-to-day lifestyle. Bell's Palsy is one of the viral diseases having symptoms like weakness of facial muscles causing deviation of the mouth, drooping of the eyelid which is caused by inflammation of facial nerve with mononuclear cells which is due to Infection or Immune cause. This present study was conducted on a patient to determine the effective management of Ardit/ Bell's palsy, which has a less adverse effect at a low cost. The patient presented with Right-sided facial paralysis, Inability to close the right eye, and Slurred Speech; which was having a history of Herpes simplex had taken symptomatic treatment comprising of Antiviral and Steroids visited at OPD and diagnosed as Ardit, which was treated with Anu Tail Nasya for seven days and showed the significant result.

**Keywords:** Ardit, Bell's Palsy, Facial Palsy, Vataj vikara, Anu Tail.

#### INTRODUCTION

Bell's Palsy is generally treated with Steroids and Antiviral therapy, which has some adverse effects on the body. Bell's Palsy (Facial Palsy) can be correlated with the *Ardit Vyadhi*, which is explained in *Vataj Nanatmaj Vyadhi by Acharyas*.

Bell's palsy is a sudden onset unilateral facial paralysis of unknown cause, which is believed to have swelling of cranial nerve VII / Facial nerve due to viral infection or immune disease<sup>1</sup>.

Bell's Palsy is one of the diseases which is having an annual incidence of 15 to 20 per 100,000, with 56,000 new cases each year, and the lifetime risk is 1 in 60, according to Matthew J. Warner *et al.*<sup>2</sup>

Many of the cases observed of Bell's palsy are having the previous infection of Herpes Simplex Virus and then having symptoms like facial palsy, drooping of the eyelid, watering of eyes, slurring of speech, drooling of saliva from the angle of the mouth, earache, trapping of food between mouth which is treated with Steroids and Antiviral medicine.

Facial paralysis can be correlated with Ardit, irrespective of Samprapti, explained by ancient acharyas. Sushruta Samhita Ardit can be associated with facial paralysis; he has said Ardit in Chikitsa Sthana.

Acharya Charak has explained Ardit in Maharogadhyaya under Vataj Nanatmaj Vikara.

Almost all Ayurveda Acharyas mention Ardit.

According to various acharyas, Nasya Karma is the specific way of treatment for Ardit vyadhi; with this particular idea, Nasya karma with Anu Tail was selected for the patient.

A single case study of Bell's palsy is reported here in which vitiated dosha was stabilised with snehan swedan purvak Nasya with Anu Tail for 14 days.

On follow-up, the patient had relief in restricted movement of the right eye and deviation of mouth.

**Aim:** To evaluate the effect of Anu tail nasya in the treatment of Ardit Vyadhi.

#### Objectives

- To get knowledge of Ardit Vyadhi in detail.
- To get knowledge of Bell's Palsy (Facial Palsy) in detail.

#### ARDIT

According to ancient Acharyas, the disease in which facial deviation occurs or half of the face has deviated is called Ardit.

According to Madhav Nidan disease in which only facial deviation occurs is called Ardit. But Acharya Charak disagrees with this saying *Ardhe tasmin mukhardhe va kevale syat.*<sup>3</sup>, i.e., only mukh vikruti or sometimes half of the body (Hemiplegia). Considering this, there will not be any difference between Ardit and Pakshaghat Chakrapani has clarified it as *Ardito vegitaya na sarvakalam bhavanti*<sup>4</sup>. i.e., Ardit vyadhi has Vega/ Episodes which are not permanent, and on the other hand Pakshaghat is permanent. Considering this, we can correlate these symptoms

with Bell's palsy having infection/ inflammation/ viral origin as per modern medicine.

Types of *Ardit* – According to *Yogratnakara*

- 1) *Vataj*
- 2) *Pittaj*
- 3) *Kaphaj*<sup>5</sup>

Symptoms in *Ardit Vyadhi*

- *Mukhavakrata*
- *Nasavakratata*
- *Greevavakratata*
- *Vedana*
- *Waksang*
- *NetraStabdhatata*
- *Lalastrava*
- *Kshavathu Nigraha*

### Chikitsa

*Acharya Charak* has said *Ardite navanam murdhitailam tarpanam ev cha*<sup>6</sup>..... i.e., particular importance has been given on *Nasya karma* and as per *Acharya Charak* in *Matrashitiya Adhyaya* has explained the use of *Anu Tail Nasya*<sup>7</sup> in *Ardit vyadhi*.

### Anatomical considerations

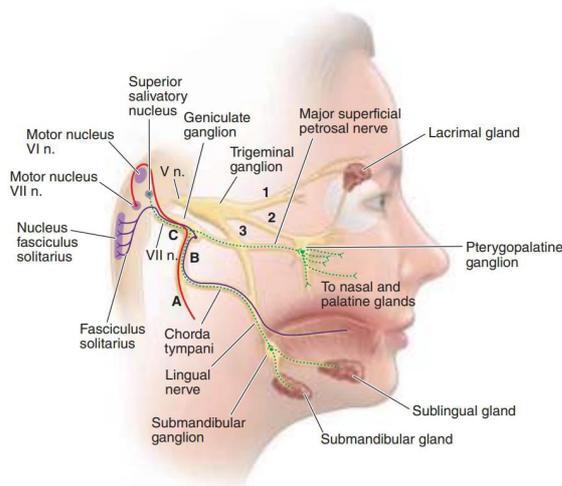


Image 1<sup>8</sup>

The seventh cranial nerve supplies all the muscles concerned with facial expression. The sensory component is small (the *nervus intermedius*); it conveys taste sensation from the anterior two-thirds of the tongue and probably cutaneous impulses from the anterior external auditory canal wall. The motor nucleus of the seventh nerve lies anterior and lateral to the abducens nucleus. After leaving the pons, the seventh nerve enters the internal auditory meatus with the acoustic nerve. The nerve continues its course in its bony channel, the facial canal, and exits from the skull via the stylomastoid foramen. It then passes through the parotid gland and subdivides to supply the facial muscles.

### Effect of the Facial Nerve when interrupted

A complete interruption of the facial nerve at the stylomastoid foramen paralyzes all muscles of facial expression. The corner of the mouth droops, the creases and skinfolds are effaced, the forehead is unfurrowed, and the eyelids will not close. Upon attempted closure of the lids, the eye on the paralyzed side rolls upward (Bell's phenomenon). The lower lid sags and falls away

from the conjunctiva, permitting tears to spill over the cheek. Food collects between the teeth and lips, and saliva may dribble from the corner of the mouth. The patient complains of heaviness or numbness in the face, but the sensory loss is rarely demonstrable, and the taste is intact. If the lesion is in the middle-ear portion, the taste is lost over the anterior two-thirds of the tongue on the same side. If the nerve to the stapedius is interrupted, there is hyperacusis (sensitivity to loud sounds). Lesions in the internal auditory meatus may affect the adjacent auditory and vestibular nerves, causing deafness, tinnitus, or dizziness. Intrapontine lesions paralyzing the face affect the abducens nucleus and the corticospinal and sensory tracts.

If peripheral facial paralysis has existed for some time and recovery of motor function is incomplete, a continuous diffuse contraction of facial muscles may appear. The palpebral fissure becomes narrowed, and the nasolabial fold deepens. Attempts to move one group of facial muscles may result in contraction of all (associated movements, or synkinesis). Facial spasms, initiated by movements of the face, may develop (hemifacial spasms). Anomalous regeneration of the seventh nerve fibres may result in other troublesome phenomena. If fibres initially connected with the orbicularis oculi come to innervate the orbicularis oris, closure of the lids may cause a retraction of the mouth, or if fibres associated originally with muscles of the face later innervate the lacrimal gland, anomalous tearing ("crocodile tears") may occur with any activity of the facial muscles, such as eating. Another facial synkinesia is triggered by jaw opening, causing the closure of the eyelids on the side of the facial palsy (jaw-winking).

### BELL'S PALSY

The most common form of facial paralysis is Bell's palsy. The annual incidence of this idiopathic disorder is -25 per 100,000 or about 1 in 60 persons in a lifetime. Risk factors include pregnancy and diabetes mellitus.<sup>9</sup>

### Pathophysiology

In acute Bell's palsy, there is inflammation of the facial nerve with mononuclear cells, consistent with an infectious or immune cause. Herpes simplex virus (HSV) type 1 DNA was frequently detected in endoneurial fluid and posterior auricular muscle, suggesting that reactivation of this virus in the geniculate ganglion may be responsible for most cases. Reactivation of the varicella-zoster virus is associated with Bell's palsy in up to one-third of patients and may represent the second most frequent cause. A variety of other viruses have also been implicated less commonly. An increased incidence of Bell's palsy was also reported among recipients of inactivated intranasal influenza vaccine, and it was hypothesized that this could have resulted from the *Escherichia coli* enterotoxin used as adjuvant or reactivation of the latent virus.

### Clinical Manifestations

The onset of Bell's palsy is relatively abrupt, with maximal weakness attained by 48 hours as a general rule. Pain behind the ear may precede paralysis for a day or two. Taste sensation may be lost unilaterally, and hyperacusis may be present. In some cases, there is mild cerebrospinal fluid lymphocytosis. Magnetic resonance imaging (MRI) may reveal swelling and uniform enhancement of the geniculate ganglion and facial nerve and, in some cases, entrapment of the swollen nerve in the temporal bone. Approximately 80% of patients recover within a few weeks or months. Electromyography may be of some prognostic value; evidence of denervation after ten days indicates axonal degeneration, there will be a long delay (3 months as a rule)

before regeneration occurs, and it may be incomplete. The presence of incomplete paralysis in the first week is the most favourable prognostic sign. Recurrences are reported in -7% of cases.

**Laboratory Evaluation,** The diagnosis of Bell's palsy, can usually be made clinically in patients with

1. A typical presentation,
  2. No risk factors or pre-existing symptoms for other causes of facial paralysis,
  3. Absence of cutaneous lesions of herpes zoster in the external ear canal, and
  4. A regular neurologic examination except for the facial nerve.
- In atypical or uncertain cases, an ESR or CRP, testing for diabetes mellitus, and MRI scanning may be indicated. MRI often shows facial nerve swelling and enhancement in idiopathic Bell's palsy.

### Treatment

Symptomatic measures include

### Anu Tail Contents

Name	Latin Name	Rasa	Vipaka	Virya
Darvi	<i>Berberis aristata</i>	Tikta, Kashay	Katu	Ushna
Ushir	<i>Vetiveria zizanioides</i>	Tikta -Madhur	Katu	Sheet
Jivanti	<i>Leptadenia reticulata</i>	Madhur	Madhur	Sheet
Shatavari	<i>Asparagus racemosus</i>	Madhur, Tikta	Madhur	Sheet
Agaru	<i>Aquilaria agallocha</i>	Tikta	Katu	Ushna
Sariva	<i>Hemidesmus indicus</i>	Madhur, Tikta	Madhur	Sheet
Bhadramusta	<i>Cyperus rotundus</i>	Tikta, Katu, kashay	Katu	Sheet
Shwetkamal	<i>Nelumbium speciosum</i>	Madhur, Tikta	Madhur	Sheet
Shwetchandan	<i>Santalum album</i>	Madhur, Tikta	Katu	Sheet
Twak	<i>Cinnamomum zeylanicum</i>	Madhur	Madhur	Ushna
Yashtimadhu	<i>Glycyrrhiza glabra</i>	Madhur	Madhur	Sheet
Bilva	<i>Aegle marmelos</i>	Tikta, Katu, kashay	Katu	Ushna
Devdaru	<i>Cedrus deodara</i>	Tikta,	Katu	Ushna

### MATERIALS AND METHODS

A male patient aged 56 years fulfilling the diagnosis criteria were selected from the OPD at Kaychikitsa Department, Yashwant Ayurvedic College of Post Graduate Training and Research Center, Kodoli, Tal. Panhala, Dist. Kolhapur, Maharashtra, India. Research Proforma of signs and symptoms was prepared for the assessment according to Modern and Ayurveda literature.

The study was divided into three stages

- Diagnostic Phase
- Interventional Phase
- Assessment Phase

**Diagnostic Phase:** A 56 years male patient having complaints of Right-sided facial paralysis (Mukhavakrata), Inability to close right eye (NetraStabdhata) Grade 1 and Slurred Speech

### Assessment Phase

#### Assessment Criteria According to Ayurveda

Symptom	Before Treatment	After Treatment	Relief %
<i>Mukhavakrata</i>	--	--	--
<i>Nasavakratata</i>	--	--	--
<i>Greevavakratata</i>	--	--	--
<i>Vedana</i>	--	--	--
<i>Waksang</i>	--	--	--
<i>NetraStabdhata</i>	--	--	--
<i>Lalastrava</i>	--	--	--
<i>KshavathuNigraha</i>	--	--	--

1. The use of paper tape to depress the upper eyelid during sleep and prevent corneal drying,
2. Artificial tears; and
3. Massage of the weakened muscles.

A course of glucocorticoids, given as prednisone 60–80 mg daily during the first five days and then tapered over the next five days, modestly shortens the recovery period and improves the functional outcome. Although large and well-controlled randomized trials found no added benefit of the antiviral agents' valacyclovir (1000 mg daily for 5–7 days) or acyclovir (400 mg five times daily for ten days) compared to glucocorticoids alone, some earlier data suggested that combination therapy with prednisone plus valacyclovir might be marginally better than prednisone alone, especially in patients with severe clinical presentations.

**Anu Tail**— Anu tail has been explained in Matrashitiya Adhyaya of Charak Sutrasthan for regular use in Dinacharya. Also, Anu Tail can be used in Ardit vyadhi.<sup>10</sup>

(Waksang) Grade 2 since 1day was selected for this study. The patient had a history of Visarpa (Herpes simplex) over the neck and mastoid region seven days back and had taken symptomatic treatment comprising of Antiviral and Steroids. Suddenly the last 1-night patient had the above complaints and visited in OPD.

**Local Examination:** On examination, his vitals were stable, and he had stopped all previous medicines. The patient had complaints of Right-sided facial Paralysis, Inability to close the right eye, and slurred speech (Bell's Phenomenon) was present.

Thus, the patient was graded according to assessment criteria and taken for study.

**Interventional Phase:** Snehan with Til tail over face and Swedan followed by Anu Tail Nasya 3 bindu in each nostril twice a day was given for 14 days, and grading was assessed.

**Assessment Criteria According to Modern methods**

Clinical features	Grading	Score	Before Treatment	After Treatment	Relief %
Watering from the Right eye	No watering.	0	-	-	-
	Persistent but do not disturb daily work.	1			
	Persistent disturb daily work.	2			
	Constant watering.	3			
Widening of palpebral aperture. (Netravikriti)	No widening	0	-	-	-
	Slightly wide (Whole cornea visible)	1			
	Moderately wide cornea & 1/3 of upper sclera visible)	2			
	Severely wide (cornea & 1/2 of upper sclera visible)	3			
Absence of Nasolabial fold.	Nasolabial fold present normally.	0	-	-	-
	The nasolabial fold is seen while trying to speak.	1			
	A nasolabial fold is seen while attempting to smile.	2			
	The nasolabial fold is never seen.	3			
Smiling sign	Absent smiling sign	0	-	-	-
	Smiling sign present without upward movement of the left angle of mouth.	1			
	Smiling sign present with upward movement of the left angle of mouth	2			
	Smiling signs are present all the time	3			
Slurring of speech	Normal speech	0	-	-	-
	Pronouncing with fewer efforts	1			
	Pronouncing with great efforts	2			
	Complete slurring	3			
Dribbling of saliva from the right corner of the mouth (Lalasarav)	Dribbling Absent	0	-	-	-
	Intermittent Dribbling	1			
	Constant but mild dribbling	2			
	Constant and profuse dribbling	3			
Trapping of food between gum and checks	No trapping	0	-	-	-
	Mild trapping (not noticeable)	1			
	Trapped but easily removable by the tongue	2			
	Trapped and need manual removal	3			
Earache (Karnashool)	No Earache	0	-	-	-
	Intermittent earache	1			
	Persistent earache, do not disturb routine work	2			
	Persistent earache disturbs routine work	3			

**RESULT AND DISCUSSION**

**Before Treatment**



**After Treatment**



**Findings and Results According to Ayurveda**

Symptom	Before Treatment	After Treatment	Relief %
<i>Mukhavakrata</i>	✓	X	Cured
<i>Nasavakratata</i>	--	--	--
<i>Greevavakratata</i>	--	--	--
<i>Vedana</i>	--	--	--
<i>Waksang</i>	✓	X	Cured
<i>NetraStabdhata</i>	✓	X	Cured
<i>Lalastrava</i>	--	--	--
<i>KshavathuNigraha</i>	--	--	--

**Findings and Results According to Modern methods**

Clinical features	Grading	Score	Before Treatment	After Treatment	Relief %
Watering from the Right eye	No watering.	0	0	0	-
	Persistent but do not disturb daily work.	1			
	Persistent disturb daily work.	2			
	Constant watering.	3			
Widening of palpebral aperture. (Netravikriti)	No widening	0	1	0	Cured
	Slightly wide (Whole cornea visible)	1			
	Moderately wide cornea & 1/3 of upper sclera visible	2			
	Severely wide (cornea & 1/2 of upper sclera visible)	3			
Absence of Nasolabial fold.	Nasolabial fold present normally.	0	0	0	-
	The nasolabial fold is seen while trying to speak.	1			
	A nasolabial fold is seen while attempting to smile.	2			
	The nasolabial fold is never seen.	3			
Smiling sign	Absent smiling sign	0	0	0	-
	Smiling sign present without upward movement of the left angle of mouth.	1			
	Smiling sign present with upward movement of the left angle of mouth	2			
	Smiling signs are present all the time	3			
Slurring of speech	Normal speech	0	2	0	Cured
	Pronouncing with fewer efforts	1			
	Pronouncing with great efforts	2			
	Complete slurring	3			
Dribbling of saliva from the right corner of the mouth (Lalasarav)	Dribbling Absent	0	0	0	-
	Intermittent Dribbling	1			
	Constant but mild dribbling	2			
	Constant and profuse dribbling	3			
Trapping of food between gum and checks	No trapping	0	0	0	-
	Mild trapping (not noticeable)	1			
	Trapped but easily removable by the tongue	2			
	Trapped and need manual removal	3			
Earache (Karnshool)	No Earache	0	0	0	-
	Intermittent earache	1			
	Persistent earache, do not disturb routine work	2			
	Persistent earache disturbs routine work	3			

Considering the above gradation patient had Right-sided facial paralysis (Mukhavakrata), Inability to close the right eye (NetraStabdhata) Grade 1 and Slurred Speech (Waksang) Grade 2. After treatment, this Grade seen in the patient is 0, i.e., the patient has complete relief.

After 14 days of treatment, complete relief was found over Right-sided facial paralysis (Mukhavakrata), Inability to close the right eye (NetraStabdhata) and Slurred Speech (Waksang) in the present case study.

**Probable mode of action of Anu Tail Nasya**

The probable Mode of Action of Snehana Karma with Til tail nourishes the Kapha, reduces Vata dosha and stimulates the sensory nerve endings, providing strength to the facial muscles. Swedana karma before the Nasya stimulates local microcirculation by dilating blood vessels, resulting in increased blood flow to the peripheral arterioles, improving drug absorption and fast recovery. It helps in the stimulation of the local nerves.

As said by ancient acharyas, Nasa Hi Shirso Dwaram, a medicated drug given by the Nasal route, helps in better absorption and better effect in urdhva jatrugat rogas. Medicated oil (anu tail) is administered through the nostrils, which reaches Sringataka Marma, from where it spreads into various Strotas (vessels and nerves) and regulates the vitiated Dosha. Nasya provides nourishment to the nervous system by neural, diffusion and vascular pathway breaking the pathophysiology of the disease.

**CONCLUSION**

From this case study, it was observed that Ayurvedic management described in ancient texts helps give significant relief to symptoms and signs of the disease of Ardit vyadhi, which can be correlated with Bell's palsy. Therapy like Snehan – Swedan Purvak Nasya regulates the vitiated Vata in the body and thus provides better nourishment to the sense organs via Shringatak Marma.

**Scope of Study:** This study was conducted on a single patient. As it affects the major community of people, detailed research on a maximum number of patients should be conducted.

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