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Research Article

MANAGEMENT OF ARDITA (BELL'S PALSY) THROUGH AYURVEDA- A CASE STUDY

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ABSTRACT

Ardita (Bell'spalsy) is considered as one among the eighty Vata Nanatmaja Vyadhis in Ayurveda. It can be correlated with the disease 'Bell's palsy. Bell's palsy is a condition that developed; facial palsy the paralysis of facial nerve also affects the movement of facial muscles and shows similar symptoms. A 40 years old male patient approached to Panchakarma OPD who was suffering from complaints of deviated face on left side, unable to chew from right side, improper blinking of right eyes and slurred speech since 20 days. He was clinically diagnosed as Bell's palsy and managed through Panchkarama & palliative treatment for 14 days. The patient got complete relief in all symptoms with appreciable changes. Bell's palsy can be managed by giving comprehensive management of Panchkarma and palliative treatment which reflects that it is good remedy for Bell's palsy.

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INTRODUCTION

Ardita is considered as one among the eighty Vata Nanatmaja Vyadhis in our Ayurvedic classics.[1] It is also considered as also as a "Shiro Roga since Shiras is the Adhistana in this entity. Hence also considered as Shiro roga. Charaka Acharya opines that this disease is localized in half of the face with or without the involvement of the body [2]. While Sushruta has considered as the face is only affected in Ardita. He further added that auxiliary points that, following Rakta Kshaya, (depletion of blood) in specific group of patients get afflicted by Ardita:

Ardita is also explained as Ekayaam by Ashtang Hrudaya. Aacharya Arunadatta has clarified that Ardita is the disease of the body mostly affecting half of the face [3], due to excessive aggravation of Vata and causes distortion of face. It can be correlated with the disease 'Bell's palsy in modern aspects. It is a condition that developed, facial palsy the paralysis of facial nerve also affects the movement of facial muscles and shows similar symptoms due to inflammation of the facial nerve within its canal above the stylomastoid foramen [4].

Bell's palsy has an incidence of 23 cases per 100,000 population/year, or about 1 in 60 to 70 people in a lifetime [5].

Case Study

Table 1 Chief complaint of the patient

| SN | Chief Complaints | Duration |
|----|---|---------------|
| 1 | Deviation of mouth on left side | _ |
| 2 | Unable to chew from right side | since 20 days |
| 3 | Inability to blink right eye completely | |
| 4 | Slurred speech | |
| _ | Dribbling of saliva on right angle of | |
| 5 | mouth. | |
| | Associated complaints | since 2 |
| 1 | Constipation | Months |
| 2 | General debility | |

History of Present Illness

A 40 years old male patient was apparently normal before 20 days but after post dinner sleep of two hours, when he woke up; noticed slight deviation of mouth to left side. At morning on next day gradually he was suffered from symptoms such as

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deviation of face on left side, unable to chew from right side, inability to blink right eyes.

Table 2 History of past illness

| Past medical history | K/C/O HTN since 5 years, No H/o DM, fall of trauma No any surgical history |
|----------------------|--|
| | Diet : Mixed, No addiction |
| Personal history | Sleep: Irregular due to night duty |
| | Occupation: Watchman |
| Drug History | Anti hypertensive medicines since 5 years |
| Family history | Not Significant |

On Examination

Systemic examinations of Respiratory system, observed no significant abnormality.

Table 3 General examination

| GC | Fair, Patient conscious, alert, oriented to time, place and Person. | |
|-----------------|---|--|
| Temp. | A febrile | |
| Pulse | 74/min | |
| BP | 130/70mmhg | |
| P/A | Slightly hard , Non tender, No organomegaly | |
| Lymphadenopathy | Absent | |
| Oedema | Absent | |
| Icterus | Absent | |
| Cyanosis | Not seen | |
| Pallor | Absent | |
| Nourishment | Moderate | |
| Built | Moderate | |

Central Nervous System Examination

- 1. Higher Motor Functions intact
- 2. Consciousness- Conscious
- 3. Orientation to- Time, place, person- Intact
- 4. Memory Recent -not affected, Remote- not affected
- 5. Intelligence- Intact
- 6. Hallucination & Delusion Absent
- 7. Speech Slow and words are mumbled

Cranial Nerve Examinations

Neurological exam noting functions of all other cranial nerves, aside from the facial nerve, are intact. Cerebellar examination is also normal.

- a. Forehead frowning not possible on right side
- b. Eyebrow raising not possible on right side
- c. Eye closure Right eyeball moves upwards and inwards when the patient attempts to close it along with incomplete closure of eyelid. (Bells phenomenon)
- d. Teeth showing not possible in right side denture
- e. Blowing of cheek not Possible in right side
- f. Nasolabial fold Naso labial fold loss on Right side.
- g. Taste perception not affected
- h. Dribbling of saliva Dribbling of saliva on Right angle of mouth and Spilling of food contents during eating from right side
- i. Bells phenomenon present on right side
- j. Deviation of mouth towards left side

Deep Reflexes such as Biceps, Triceps, Supinator, Knee jerk, Ankle jerk and Plantar reflex are normal.Muscle power and Muscle tone in all limbs are also normal.

Co-ordination Upper limb • Dysdiadokinesia- absent • Finger to nose test- possible • Pronator Drift- Possible • Fine movements- No abnormality detected Lower limb • Tandem walking- Possible • Heel shin test- Possible • Heel walk-Possible

Specific Investigations

MRI Brain (Date-18/11/17) -Demonstrates a neoplasm compressing the facial nerve

Diagnosis - Ardita (Bell's palsy)

Table 4 Plan of external treatment

| SN | Type of Panchkarma treatment | Drugs |
|----|--|---|
| 1 | Whole body massage | Masha oil |
| 2 | Face massage | Masha oil |
| 3 | Kukuntanda sweda + Ksheerdhooma over face | Bala (Sida cordifolia)+Dashmool (ten roots of certain medicinal plants) for Ksheerdhooma (steam of medicated milk) |
| 4 | Nasya (Errhine therapy) | Panchedriya Vardhana oil |
| 5 | Jivha pratisarana (tongue brushing) | Trikatu (Black Pepper, Long Pepper, rhizomes of Ginger powder) +Vacha (sweet flag) +yastimadhu (Licorice) powder with |
| | | honey |

Table 5 Plan of internal medication

| SN | Palliative treatment | Drug | Anupana (Vehicle) | Duration |
|----|-----------------------------|-------------------|-------------------|----------|
| 1 | Maharasnadi kashaya | 15ml twice a day | Luke warm water | 5days |
| 2 | Cap.Palsineuron | 1 cap twice a day | Luke warm water | 5days |
| 3 | Cap.Ksheerbala 101 | 1 cap twice a day | Luke warm water | 5days |
| 4 | Gandharvaharitaki powder | 10gm at bed time | Luke warm water | 5days |

RESULT

Assessment was done on the basis of scoring of cardinal associated signs and observed symptoms. A facial nerve function grading by House-Brookman grading measures was used to assess outcomes [8].

Table 6 Comparison of subjective parameters

| Parameter | Before | After 7 days | After 14 days |
|--|---|---|--|
| Deviation of mouth towards left side | Grade- 4 | Grade 2 – slightly deviated Decreased By 10% | Decreased By 75 Percent. Turning to Normal symmetry of face was able to wrinkle the forehead and raise the Eyebrows. |
| Unable to chew from right side and trapping of food between gum and cheeks | Grade-3 | Grade-2 (able to chew with difficulty) | Easily chew from right side |
| Improper blinking of right eye | Grade- 4 | Grade 2 – occasionally blinks controlled | Easily blink right eyelid and complete closure of eyelid |
| Slurred speech Complete slurring | Grade-3 | Mild improved Pronouncing with less efforts | Moderately Improved Normal speech |
| Dribbling of saliva | Constant but mild dribbling | Dribbling Intermittent Dribbling | Dribbling Absent NOW able to hold water in mouth and there was no dribbling of saliva. |
| Widening of palpebral aperture | Severely wide (cornea & ½ of upper sclera visible) | Moderately wide (cornea & 1/3 of upper sclera visible) | Slightly wide (Whole cornea visible) |
| Nasolabial fold | Absence of Nasolabial fold | Nasolabial fold seen while attempting to smile. | Nasolabial fold not present on left side. Nasolabial fold present normally |
| Smiling sign | Smiling sign present with upward | Smiling sign present without upward | |

| | movement of left angle of mouth | movement of left angle of mouth | |
|--------------|---------------------------------------|---------------------------------------|-----------------|
| Constinution | Moderate | No constinution | No constination |

100% relief was found in slurred speech, dribbling of saliva from right corner of mouth, 75% relief was found in trapping of food between gums and cheek. 50% relief was found in widening of palpebral aperture, absence of Nasolabial fold and in smiling sign. Before starting the treatment the House Brackmann's grading of facial nerve was Grade 4 and after commencement of 14 days treatment; it was Grade 2. There was no side effect observed during and after the treatment.



Before treatment



After treatment

DISCUSSION

The functions of sense organs impaired in Ardita (Bell's palsy), hence Ardita (Bell's palsy) considered as a disorder of sense organ which are governed by the Omni presence of Vata. Charaka attributed the root cause of Ardita (Bell's palsy) to highly vitiated Vata dosha whereas Ayurveda experts Shodhal classified Ardita on doshic influence of Kapha and Pitta rather than Vata. Nadi swedna (Tubal sudation) and Nasya (Errhine therapy) is explained in classics like Charaka and Sushruta for treatment of Ardita. Sushruta described medication for Ardita in his Sutrasthana giving special emphasis on Nasya (Errhine therapy).

As per *Vagbhata* and *Charaka*, *Ardita* requires a nourishing type of therapy [9]. *Nasya Karma* (Errhine therapy), *Moordha Taila* (application of oil to the head), *Tarpana* (Libation) with medicated oil to the eyes and ears, *Nadi Sweda* (Tubal sudation), *Upanaha Sweda* (application of poultice) are included in the treatment principle of *Ardita*.

Keeping all these efficacious treatment modalities in mind, the comprehensive treatment was planned for the present case.

Sarvang abhyanga & Mukhabhyanga with Masha taila (Whole body & facial massage with black gram oil) [10] -

Black gram oil has pacify *Vata-Kapha*, strengthen and anabolic nutritive properties. So it provides very good effect on aggravated *Vata*. The massage and sudation will help to loosen the adhesive *doshas* thereby facilitating the subsequent treatment.

Facial massage improved the motor function by stimulating and strengthening the facial nerves and muscles. The internal medicines were also selected for the pacification of *Vata*. Massage with *Ksheerbala* oil nourishes the *Shleshaka Kapha* (*Kapha* placed at the point of each joint) stimulate the sensory nerve endings and provide strength to the facial muscles [11]. *Ksheer Dhomma Swedana* (medicated milk steam) liquefied the deranged *Doshas* and facilitate their expulsion by subsequent Panchakarma procedures.

Kukuntanda sweda (Table no.7) – Egg sudation is practiced mainly by Kerala vaidya. It comes under the variety of *Ushma sweda* (wet sudation) [12]. Following materials required for one day:

Table 7 Comparison of subjective parameters

| SN | Drug | Content | Quantity |
|----|---------------------------------|--|----------|
| 1 | Kolakulatthadi powder | Kola (Zizyphus jujube Lam.), Kulattha – Horse gram (Dolichos biflorus Linn.), Suradaru – Devadaru – (Cedrus deodara), Rasna (Vanda roxburghi / Pluchea lanceolata), Masha – Black gram (Phaseolus radiatus L.), Atasi (Linum usitatissimum Linn.), Kushta– SaussurealappaVacha – Acorus calamus, Shatahva – Indian Dill – Anethum sowa, Yava – Barley – Hordeum vulgare, Tailaphala – castor fruit (Eranda)] | 400 gm |
| 2 | Methika (fenugreek) | - | 100 gm |
| 3 | Haridra (turmeric powder) | - | 100 gm |
| 4 | Lemon | - | One |
| 5 | Egg Yolk | - | 10 |
| 6 | Cotton cloth | - | 2 meter |

Mild sudation before the Errhine therapy, and after facial massage enhance local microcirculation by dilation of blood vessels and increasing blood flow to the peripheral arterioles which accelerates the drug absorption and fast improvement. It also stimulates the local nerves [13].

Errhine therapy with panchedriyewardhana oil- The Errhine therapy is indicated in speaking difficulty. Oil has mainly Vata pacifying properties, which relieves Vata obstruction specially the flow of Vyana (one of the variety of Vata). Blinking is function of eyelids which was the hampered due to Chala property of aggravated Vata, and is relieved by Sthira property of oil. Errhine therapy due to its therapeutic effect as well as pharmacological effect of Panchedriyavardhana oil helps to combat it by its purifying as well as nutritive properties. The relief in the Bell's palsy may be due to the decreased inflammatory response by relieving compression and ischaemia of the nerve in the narrowest part of the fallopian canal, which is the collective effect of therapy. Dribbling of saliva is though due to dropping of corner of mouth. It may be improved as affected side of mouth restores its normal position.

Errhine therapy with *Panchedriya Vardhana* oil- relives the obstruction of vitiated *Vata* in the *Murdha* (head) and it restores the natural functionality of affected nerves and improves blood circulation to concerned areas of the brain [14]. It also provides nourishment to the nervous system by neural, diffusion and vascular pathway [15].

Maharasnadi kashaya pacify the *Vata* and corrected there flow in the body. Cap.Palsineuron- *Ekangaveera Rasa* used orally act as anabolic, revitalize, detoxifier which helps in enhancing the speed of recovery in the patients of Bell's palsy [16].

Cap.Ksheerbala 101- it restores the natural functionality of affected nerves and improves blood circulation to concerned areas of the brain [17].

Gandharva haritaki powder – Mild purgative which induces *Vatanuloman* (downward flow of *Vata*) and relieves constipation. It helps to relieved a *pakvshayagata vata* has a laxative properties pacify *vata* from the *pakvashaya*.

Probable Combined Mode of Action of Treatment

Sudation and Errhine therapy was found to be highly effect in management of Bell's palsy. The treatment provides strength to facial muscles, strengthens the nerves, improve the blood circulation and there will not be any recurrence of the disease since 10 month. It improved the motor function by stimulating and strengthening the facial nerves and muscles.

CONCLUSION

Ardita (Bell's palsy) can be managed with comprehensive application of Kukuntanda sweda, Ksheer Dhooma, Nasya and palliative treatment such as Cap.Palsineuron, Maharasnadi Kashaya, Cap.Ksheerbala101,Gandharvaharitaki powder. Combined treatments pacify the vitiated Vata in the body and provide nourishment to the sense organs. Moreover the drugs used internally and externally are having additional effect in relieving all the signs and symptoms. However as this is a single case study, similar studies needed to be done on larger sample size to establish statistical significance of present line of treatment.

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