

PHYSIOTHERAPY IN ARDITAVATA (BELL'S PALSY)

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ABSTRACT

Physiotherapy also known as Physical therapy, by means of mechanical force and movements, Manual therapy, Exercise therapy, and electrotherapy, Set straight the impairments and promotes mobility and function. Physiotherapy plays important role in treating in different Neurological disorder like Bell 'Palsy, Stoke and so on achieving with god recovery in the same. Arditavata is diseases explained by Acharya in Vatavyadhi which will correlating with Bell 'Palsy. Bell's Palsy is a disease which is Lower motor lesion. This article highlights brief about the disease Bell's palsy, Arditavata and basic aspects of Physiotherapy and what are specific Physiotherapy carried out in Bell 'Palsy (Arditavata) explained.

KEYWORDS: Physiotherapy, Bell 'Palsy, Arditavata

INTRODUCTION

Physiotherapy generally defined as to make a person from immobile to mobile. Physicians like Hippocrates believed to have been the first practitioners of physical therapy; they are advocating massage, manual techniques and hydrotherapy to treat people in 460 BC. Physiotherapy is based on mainly two principles i.e. Heat and Cold. Administration of these two through various modalities is the way of treatment in physiotherapy.

Definition of Physiotherapy¹:

Physiotherapy is defined as the therapy that uses physical agents: exercise and massage and other modalities. Physiotherapy is also defined as a healthcare profession concerned with human function and movement and maximizing potential. It uses physical approaches to promote, maintain, and restore physical, psychological and social wellbeing, taking account of variation in

health status. It is a science based committed to extending, applying, evaluating and reviving the evidences that underpins and informs its practice and delivery². Physiotherapy means a health care profession primarily concerned with the remediation of impairments and disabilities and the promotion of mobility, functional ability, and improves quality of life.

Synonym: Physical therapy

Physical Therapy is the science of treating people with physical special needs (or those who may develop physical disabilities), to help them minimize and/or maintain basic functional abilities (e.g., sitting, standing, walking) and minimize their condition from progressing as much as possible

Aims of Physiotherapy:

1. The purpose of Physical Therapy is to help the patient return back to active life as

quickly as possible and to the best he/she can accomplish.

2. Physical therapy strives to reduce pain, increase flexibility, range of motion, and function, build strength, and correct posture.

3. It gives importance of physical fitness and its relationship to illness and injury.

Classification of Physiotherapy:

1. **Exercise therapy**-Shoulder wheel, Pedal-o-cycle, Foot exercise, etc.

2. **Electro therapy**-Ultrasound, SWD, UVR, IR, IFT, TENS, Wax bath, etc.

BELL 'PALSYP³:

CAUSES: Exposure to cold subsequent compression of nerve trunk within rigid fallopian canal causes circulatory disturbances. Other important cause acute

Table No.1. Clinical features of Arditavata according to different acharyas and Bell's palsy for better understanding we can bifurcate the signs and symptoms based on organ involved^{5,6,7}

facial palsy includes Supportive otitis media, herpes zoster, head injury, Gillian berre syndrome, sarcoidosis and multiple sclerosis.

Bell's palsy most common in 3rd decade. The lesion is within facial canal and may be due to reactivation herpes simplex virus/ infection. Idiopathic isolated facial nerve palsy. This is common condition affecting all ages and both sexes. Vascular compression and mass lesion over the facial nerve are the usual causes.

The patients noticed sudden unilateral facial weakness sometimes with loss of taste on the anterior 2/3rd of the tongue. Pain behind the ear is common at onset. Diagnosis made on clinical ground⁴.

SL.NO	BELLS' PALSYP	ARDITA ⁸
1	HEAD & FACE: a) Tremor of Head b) Loss of furrows on forehead c) Facial pain d) Facial deviation e) Facial weakness f) Loss of Facial expression on affected side	SHIRAS AND LALATA: Shirashoola Murdhakampa Lalatavalinasha
2	EYE: a) Eye lid drops on affected side b) Inability to close on affected side c) Excessive lacrimation d) Pain in Eye	NETRA: Akshinimilana asamartyata Netrastabdhatta Ashrusrava Akshishoola Bhruvavrata
3	NOSE: a) Deviation of nose b) Loss of Nasal furrows c) Naso labial fold flattened d) Loss of Smell	NASA: Nasavrata Nasavalinasha Gandha aghnana
4	MOUTH: a) Angle of mouth droops b) Excessive saliva c) Tongue deviation d) Inability to speak e) Loss of taste	MUKHA: Mukha vrata Vaksanga Mukharparshva shithilata Jiwhavrata Dantashoola

	f) Food collects between teeth and cheeks g) Pain in Cheeks h) Toothache	Rasashunyata Chibhukavedana Lalasrava Mukhashoola Food droops out while eating
5	EAR: a) Hyperacusis (Abnormal acuteness of hearing) b) Deafness c) Pain in Ear d) Pain in stylomastoid part	KARNA: Karnanada Badhirya Karnashoola
6	MISLLANEOUS: a) Fever b) General debility c) Pain over neck BELL'S PHENOMENON:	Annya: Jwara Dourbalya Greevashoola and Greevavakrata Shotha and Stabdhata Swarabhramsha Netraghola chalana asamarthata

Physiotherapy in Bell's palsy^{9,10}:

1. Resolving the Inflammation: If the patient comes immediately following the onset of paralysis, then may be treatment with either Short wave diathermy (SWD) or Infrared to increase the circulation in the stylo mastoid foramen so that the inflammation can be resolved. If the paralysis is only due to compression or neurapraxia then the patient will show miraculous recovery. One of the inflammation is resolved and compression on the nerve is relived such heat modalities can be tried for a period of one week to Ten days.

2. Maintenance of muscle properties: This can be achieved with Interpreted galvanic stimulation to the paralyzed muscles.

3. Facial Massage: Massage is essential to maintain the circulation to the face as well as to keep the face supple. The direction of the manipulation used should be upward direction and not downward direction.

4. Taping or splinting: These methods are used to decrease the facial asymmetry noticed in Bell's palsy.

1. Eye care: The patient may be instructed to wear protective goggles to prevent entry of foreign bodies into the patient's eyes.

2. Faradic Re-education: Only if the patient can tolerate sensory stimulus of faradic current to the face, faradic re-education is given other means of re-educating the movement is by using PNF techniques, visual feedback exercise.

3. Visual feedback exercise: The patient may be asked to do facial exercise in front of mirror, so that he gets visual feedback and can perform the exercise more efficiently. Like-

- Closing of the eyes
- Smiling
- Showing teeth
- Rising upper lip
- Closing mouth
- Whistling
- Blowing
- Chewing
- Wrinkling forehead
- Dilating nostrils
- Pronunciation of words A, E, I, O,

Strengthening Exercises: Once the facial muscles reach grade 3 or fair then resistance can be given to muscle action to further strengthen them.

During Paralysis-

1. Ultrasound given over the nerve trunk just in front of the tragus of the ear may reduce the inflammation.

2. Massage may be given taught to the patient-

A.Stroking in an upward, outward direction

B.Slow finger kneading applied over the paralysed muscles maintains skin suppleness and muscle elasticity.

C. These techniques applied for 5min or so daily help to maintain lymphatic and blood flow and prevent contractures.

1. Advice:

A. The patient should be lie down at intervals throughout the day to reduce the effects of gravity on the paralyzed muscles.

B.The eye should be bathed regularly because the normal blinking reflex is lost and dust particles collect, producing conjunctivitis.

Recovery stage: Mild infra- red treatment may be applied to warm the muscles and improve the functions the eye must be protected with wet cotton wool.

1. Quick stretch technique can be applied to regain rising of the eyebrow and the movements of the corner of the mouth.

2. The physiotherapist can produce the movement passively then ask the patient to hold, and then try to produce the movement.

3. Icing, brushing, tapping or brisk stroking may be applied along the length of the muscles ex- the zygomatics.

Exercises¹¹:

1. Look surprised the frown

2. Squeeze eyes closed then open wide

3. Smile, grin say "O"

3. Say A, E, I, O, U

4. Hold straw in mouth- suck and blow

5. Whistle.

These exercises are performed in lying at first, then sitting up. The patient may be assist at first then progress to resisting. A mirror is useful to enable the patient to observe the muscle activity. Generally patients should be practice these exercises twice a day with about five repetitions at a time so as not to fatigue the muscles. It is not necessary for the patient to be seen by the physiotherapist very often, but monitoring visit should be arranged.

Failure to recover:

It will not help the patient who has paralysed and persist beyond 3 months. It is serious handicap within society, and some people may withdraw and depressed and difficult to do business or perform work and inter- personal communication.

Tropic electrical stimulation is therefore of enormous value to these people. This is an electrical current of pulse width 80s, frequency 5-8Hz, Voltage- 0-18V, Programme- 2s on /2 s off for -5h daily in two sessions. This modality, together with active re-education techniques has been shown to improve muscle function and facial symmetry in long standing cases of facial palsy.

HEAT

Regulation of the body temperature depends upon the balance between heat produced in the body and the heat lost from the body.

Heat gain or Heat production in the body:

Various mechanisms involved in heat production in the body.

Muscular activity: Heat is produced in the muscle both at rest and during activities. During rest heat is produced by muscle tone. Heat produced during muscular activity is called heat of activity. About 80% of heat of activity is produced by skeletal muscles.

Regulation of Body Temperature: Body temperature is regulated by hypothalamus which sets the normal range of the body temperature.

Hypothalamus has the centre which regulates the body temperature.

1. Heat loss center and 2. Heat gain center

Heat loss center	Heat gain center
Heat loss center is situated in pre optic nucleus of anterior hypothalamus. Neurons in pre optic nucleus are heat sensitive nerve cells, which are called as Thermo receptors. Stimulation of pre optic nucleus results in cutaneous vasodilatation and sweating. Removal or lesion of this increases body temperature.	It is also known as heat production center. It is situated in posterior hypothalamic nucleus. Stimulation of posterior hypothalamic nucleus causes shivering removal of lesion of this nucleus leads to fall in the body temperature.

Mechanism of Temperature regulation:

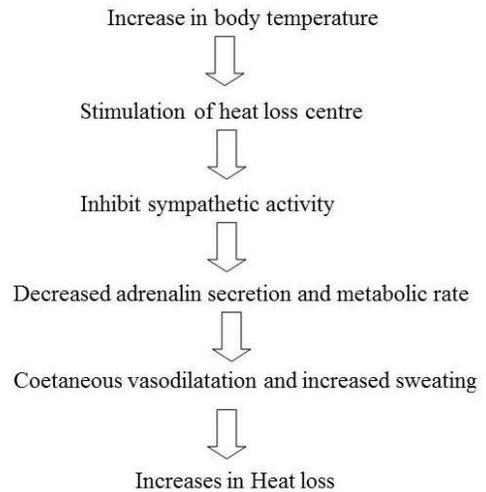
When body temperature increases, blood temperature also increases. When blood with increased temperature passes through hypothalamus, it stimulates the thermo receptors present in the heat loss center in pre optic nucleus. Heat loss centre brings the temperature back by two mechanisms.

1. Promotion of heat loss and 2. Prevention of heat production

Promotion of heat loss:

When body temperature increases- Inhibit sympathetic centres in posterior hypothalamus- This causes cutaneous vasodilatation. Now the blood flow through skin increases causing excess sweating. It increases the heat loss through sweat.

Promotion of heat production- Increases metabolic reaction which is activated by heat gain centre, stimulate secretion of adrenaline and noradrenalin. These particularly increase heat production by accelerating cellular metabolic activities. Simultaneously, hypothalamus secretes thyrotrophic releasing hormone.



DISCUSSION

- The amount of time needed depends on the type of Physical Therapy.
- In general, patient feels better by following Physical Therapy.
- Thus Physiotherapy exercises along with proper Ayurvedic management will definitely produce better results.
- For Bell's palsy the exercises like oil pulling (Gargling), blowing the balloon, Facial massage and Whistling will promote in better result.

-One course of treatment with proper time and appropriate duration will help in faster recovery in Bell's palsy.

CONCLUSION

- Physiotherapy is one of the alternative treatment modality having wide scope of practice in Neurological, Musculo-skeletal disorder.

- The therapy which includes Exercise therapy and Electro therapy based on the condition may select the therapy.

- Physiotherapy treatments make the person form inactive to active by different Exercise therapy and Electro therapy which also reduce disease progression and reduce relapse and disease severity.

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