

CEREBRAL ATROPHY – A CASE STUDY**Urvi Chavda^{1*} and Satya Deo Pandey²**

¹MD Panchakarma, PhD Scholar, Assistant Professor, Department of Panchakarma, Desh Bhagat Ayurved College and Hospital, Mandi Gobindgarh – (Punjab).

²Ex-Principal, Professor and Dean, Department of Kayachikitsa, Desh Bhagat Ayurved College and Hospital, Mandi Gobindgarh – (Punjab).

Article Received on
26 Nov. 2021,

Revised on 16 Dec. 2021,
Accepted on 06 January 2022

DOI: 10.20959/wjpr20222-22867

Corresponding Author*Dr. Urvi Chavda**

MD Panchakarma, PhD
Scholar, Assistant Professor,
Department of
Panchakarma, Desh Bhagat
Ayurved College and
Hospital, Mandi Gobindgarh
– (Punjab).

ABSTRACT

‘Cerebral Atrophy’ is a common feature of many diseases that mainly affects the Brain. ‘Atrophy’ of any tissue means loss of cells or decrement in the size of the cell, which can be due to progressive loss of Cytoplasmic Proteins. In case of Brain tissue, Atrophy describes a loss of neurons and the connections between them. Atrophy can be generalized, which means that all of the Brain has shrunk; or it can be focal, affecting only a limited area of the Brain and resulting in a decrease of the functions that area of the Brain controls. The human brain completes growth and attains its maximum mass at around twenty five years of age and it gradually loses mass with each decade of life, although the rate of loss is comparatively tiny until the age of sixty, when approximately 0.5 to 1% Brain Volume is lost per year. By the age of seventy five, the Brain is an average of 15% smaller than it

was at twenty five. It is not possible to reverse Brain Atrophy after it has already occurred but there may be some ways of preventing or slowing it down. In Ayurveda, this particular condition of Cerebral Atrophy is not described as it is but its pathology can be understood based upon the concept of Tridoshas. Nervous System is related to the aggravation of the Vata Dosha due to diet and lifestyle changes which aggravate Vata inside the Body. As old age is a period of Vata aggravation, Atrophy is commonest in old age. In this case study, an attempt has been made to treat a seventy five year old male patient with Therapeutic Panchakarma like Brimhana Nasya and Shirodhara, along with Shamana Chikitsa.

KEYWORDS: Ayurveda, Tridoshas, Vata Dosha, Panchakarma, Brimhana Nasya, Shirodhara, Shamana Chikitsa.

INTRODUCTION

‘Ayurveda’ is more than a ‘System of Healing’. It is a Science and ‘Art of Living’ that helps us to achieve health and longevity. Ayurveda has rightly emphasized that health is not only the state of not having disease but, it is the state of normalcy of Dosha, Dhatu, Agni and Malakriya. It also includes the Prasanna Atma (Soul), Indriya (Sense Organs) and Manas (Mind). The three Doshas of the Body, namely Vata, Pitta and Kapha, which broadly represent the Nervous System, the Metabolic System and the Nutritive System respectively, keep the human body in balance. Whenever this delicate balance is disturbed, a disease may be manifested. The main objective of the Ayurvedic system of treatment is to restore the original state of equilibrium between the Doshas. In order to achieve the same Ayurveda has advocated certain regimens and treatment modalities such as – Dinacharya, Rutucharya, Vega Adharana, Rasayana – Vajikarana and Panchakarma. Panchakarma is a method of cleansing the body of all the unwanted waste after lubricating it. Panchakarma therapies are five (5) in number hence the term coined as Pancha (Five) and Karma (Procedures). Panchakarma treatment is unique in the sense that it inculcates preventive, curative and promotive actions for various diseases. Cerebral Atrophy is a degenerative condition wherein there is wasting or shrinkage of the Brain due to loss of cerebral volume. As per the classical concept of ‘Dhatu Kshaya’, Cerebral Atrophy can also be understood on the basis of concept of Majja Dhatu Kshaya. In this single case study, we will see the effects of Panchakarma treatment in relieving the symptoms caused by Cerebral Atrophy in an elderly male patient (seventy five years old). Hence, through this Case Study, an attempt has been made to understand the role of Nasya Karma and Shirodhara in relieving the symptoms caused by Cerebral Atrophy.

MATERIALS AND METHODS

Patent Medications were used for ‘Nasya Karma’ therapy and for ‘Shirodhara’.

MATERIALS

- ✚ The Patent Medication used for ‘Nasya Karma’ – KsheeraBala 101 Aavarthi Taila of Vaidyaratnam Pharmaceuticals. (Reference of Formulation prepared – From Text of Sahasrayogam)
- ✚ The Patent Medication used for conducting Shirodhara – KsheeraBala Taila by Kotakkal Arya Vaidya Sala (Reference of Formulation prepared – From Text of Bhavaprakasham)
- ✚ ‘Murchita Tila Tailam’ was used for Mukha and Shiro Abhyanga (as a part of ‘Poorvakarma’ of Nasya Karma).

- ✚ 'Haridra Dhooma Varthi' was specially prepared with Triphala Ghrita and Haridra Choorna. A wick like Varthi was prepared from cotton, by rolling it between the palms of the hands and thereafter anointing it with the liquefied lukewarm 'Triphala Ghrita' and fine powder of Haridra Choorna. (Inhalation of medicated smoking is done as a part of 'Paschaat Karma' of Nasya Karma)
- ✚ For ten to twelve days consecutively, the procedures of Shirodhara and Nasya Karma were conducted and assessment of the efficacy of these Panchakarma therapies was done based upon the relief of the signs and symptoms.

✚ **Study design:**– Single Case Study

✚ **Diagnosis criteria**

The Diagnosis Criteria is based on the CT Scan of Brain which was suggestive of Mild Cerebral Atrophy.

METHODS

■ Treatment protocol

NUMBER OF DAYS	NAME OF THE PANCHAKARMA PROCEDURE	MODE OF ADMINISTRATION	EFFECT ON THE SIGNS AND SYMPTOMS	DURATION
DAY – 1	NASYA KARMA AND SHIRODHARA	<ul style="list-style-type: none"> ▪ NASYA KARMA – THROUGH NASAL ROUTE ▪ SHIRODHARA – DRIPPING OF OIL EXTERNALLY ON THE FOREHEAD REGION 	MILD RELIEF OF THE SYMPTOMS LIKE WEAKNESS OF THE FACE, NUMBNESS, MOOD DISTURBANCES, TINNITUS AND HEAVYNESS OF THE HEAD	<ul style="list-style-type: none"> ▪ NASYA KARMA – 30 TO 40 MINUTES ▪ SHIRODHARA – 40 TO 45 MINUTES
DAY – 2	NASYA KARMA AND SHIRODHARA	<ul style="list-style-type: none"> ▪ NASYA KARMA – THROUGH NASAL ROUTE ▪ SHIRODHARA – DRIPPING OF OIL EXTERNALLY ON THE FOREHEAD REGION 	MILD RELIEF OF THE SYMPTOMS LIKE WEAKNESS OF THE FACE, NUMBNESS, MOOD DISTURBANCES, TINNITUS AND HEAVYNESS OF THE HEAD	<ul style="list-style-type: none"> ▪ NASYA KARMA – 30 TO 40 MINUTES ▪ SHIRODHARA – 40 TO 45 MINUTES
DAY – 3	NASYA KARMA AND SHIRODHARA	<ul style="list-style-type: none"> ▪ NASYA KARMA – THROUGH NASAL ROUTE ▪ SHIRODHARA – DRIPPING OF OIL 	MILD TO MODERATE RELIEF OF THE SYMPTOMS LIKE WEAKNESS OF	<ul style="list-style-type: none"> ▪ NASYA KARMA – 30 TO 40 MINUTES ▪ SHIRODHARA – 40 TO 45 MINUTES

		EXTERNALLY ON THE FOREHEAD REGION	THE FACE, NUMBNESS, MOOD DISTURBANCES, TINNITUS AND HEAVYNESS OF THE HEAD	
DAY – 4	NASYA KARMA AND SHIRODHARA	<ul style="list-style-type: none"> ▪ NASYA KARMA – THROUGH NASAL ROUTE ▪ SHIRODHARA – DRIPPING OF OIL EXTERNALLY ON THE FOREHEAD REGION 	SYMPTOMS LIKE WEAKNESS OF THE FACE, NUMBNESS, MOOD DISTURBANCES, TINNITUS AND HEAVINESS OF THE HEAD WERE FOUND TO BE RELIEVED MODERATELY	<ul style="list-style-type: none"> ▪ NASYA KARMA – 30 TO 40 MINUTES ▪ SHIRODHARA – 40 TO 45 MINUTES
DAY – 5 TO DAY – 12	NASYA KARMA AND SHIRODHARA	<ul style="list-style-type: none"> ▪ NASYA KARMA – THROUGH NASAL ROUTE ▪ SHIRODHARA – DRIPPING OF OIL EXTERNALLY ON THE FOREHEAD REGION 	PATIENT'S THINKING AND FUNCTIONING IMPAIRMENT WAS RESOLVED CONSIDERABLY AND OTHER SYMPTOMS LIKE – SLOWED THINKING, NUMBNESS, MOOD DISTURBANCES, TINNITUS, DEMENTIA AND TREMORS OF THE HANDS WERE FOUND TO BE RELIEVED SIGNIFICANTLY	<ul style="list-style-type: none"> ▪ NASYA KARMA – 30 TO 40 MINUTES ▪ SHIRODHARA – 40 TO 45 MINUTES

Shamana chikitsa: (Palliative treatment)

Patient was prescribed the following Palliative Treatment for 2 Months:

- Saraswatarishtam (Medhya Rasayana) 20 ml twice a day after food along with equal quantity of water.
- Alert Capsules (Vasu Pharmaceuticals) – One Capsule thrice a day after food with water. After one month, 'tapering dose' of Alert Capsules was advised to the Patient, that is, One Capsule twice a day for another one month.

- Vasalus Capsules – One Capsule twice a day after food with water.

 **Assessment:** Assessment was done in two ways:-

- ◆ Firstly after the administration of the Medications.
- ◆ Secondly after carrying out the Panchakarma Therapies, viz. Nasya Karma and Shirodhara
- ◆ Assessment was done based on the relief of the following signs and symptoms that occurred owing to Cerebral Atrophy:

- I. Dementia
- II. Slowed Thinking
- III. Tremors of the hands (Parkinsonism)
- IV. Thinking and functioning impairment
- V. Weakness and Numbness of the Face (Facial Numbness)
- VI. Mood Disturbances
- VII. Tinnitus
- VIII. Heaviness of the Head
- IX. Insomnia

RESULTS

(Post – treatment Responses based on Signs and Symptoms)

- ◆ Patient felt quite better after undergoing Nasya Karma as heaviness of head reduced gradually.
- ◆ Tinnitus diminished significantly.
- ◆ Mood Disturbances got cured significantly.
- ◆ Weakness and Numbness of the Face got relieved.
- ◆ Patient's thinking and functioning impairment got cured and his memory power improved.
- ◆ Tremors that occurred in the hands got relieved significantly.
- ◆ Patient's complaint of insomnia got relieved significantly and his disturbed sleep was converted to sound sleep.

DISCUSSION

(Probable mode of action of nasya Karma and Shirodhara)

There is no specific treatment or cure for Cerebral Atrophy. Some Symptoms of underlying causes can be managed and treated. Controlling Blood Pressure and eating a healthy,

balanced diet is advised. Ayurveda understands pathology as the derangement or disturbance in the bodily constituents i.e. Dosha, Dhatu and Mala. The goal of the treatment is to bring them back to equilibrium. According to Acharya Sushruta, the treatment principle of Ayurveda is Nidana Parivarjanam. The decreased Doshas should be increased, the aggravated Doshas should be decreased and the increased Doshas should be eliminated out from the Body. Based on these principles, we have selected Shirodhara for Stress Management (Stress is the main cause for the occurrence of headache). For Brimhana Nasya, Ksheera Bala 101 Aavarthi Taila was used, and eight drops were instilled in each of the nostril. 'Ksheera Bala 101 Aavarthi Taila' is processed one hundred one times and is made up of key ingredients like Bala, Ksheera and 'Til Taila'. Ksheera Bala Taila is very effective in correcting the derangement of Vayu or Vata Dosha and it balances the Vata Dosha effectively. Ksheera Bala 101 Aavarthi is also an ideal choice of medicine in treating ADHD, Sensory Disorder, Hyperactivity etc. Hence, Brimhana Nasya provides nourishing effect to the Brain and delays the process of degeneration of the brain tissue. The medicated oil that is poured from a height of 4 angulas, as a part of Shirodhara, on the forehead produces some magnetic waves due to the flow of oil. It strikes on the surface of the Skin and electrical waves are generated and are transferred to the cerebral cortex and hypothalamus. This results in the secretion of the various neurotransmitters like epinephrine, serotonin, dopamine, etc. Hypothalamus controls the functioning of the pituitary gland, which in turn controls all the systems of the body. Pratimarsha Nasya with Ksheera Bala 101 Aavarthi is administered in the form of Brimhana Nasya as it is indicated in Vataja Shula and for the purpose of Tarpana as there is degeneration of the brain tissue. According to Acharya Vagbhata, the drugs administered through the Nose will enter the Brain and pacify the Doshas. It is explained that Nasa being the doorway or gateway to the Shiras, the drugs administered through Nostrils, reaches Sringataka by Nasavaha Srotas and spreads in the Murdha taking route of Netra, Shrotra, Kantha, Sira Mukhas etc. and scrapes the morbid doshas in the supraclavicular region and extracts them from the Uttamanga. Oil being lipophilic in nature has the capacity to cross the blood brain barrier, and can exert its direct Neuro-supportive role to the CNS. Nasal Medication also bypasses the 'First-pass Metabolism' of the Liver and thus its pharmacological efficacy is retained without any interruption.

Thus, the combination of the above treatments produced a synergistic effect and caused marked improvement in the condition of the Patient.

CONCLUSION

This Case Study demonstrates that Ayurvedic Panchakarma therapies have significant role in the management of Cerebral Atrophy. Condition of the Patient has improved significantly. Chief complaints like Tinnitus, Insomnia, and Dementia showed a sustained gradual improvement with Shirodhara and Brimhana Nasya Karma. These therapies have improved the Q.O.L (quality of life) of the patient considerably. These results give in to contemplating the need of inclusion of Ayurvedic Panchakarma therapies in neurodegenerative disorders, thereby strongly supporting the necessity of integrated medicine.

REFERENCES

1. Harrison's Principles of Internal Medicine, 17: 385.
2. Goodman and Gilman's Pharmacological Basis of Therapeutics, 13.
3. A Textbook of Panchakarma – By Dr B. A. Lohith.
4. Principles and Practice of Panchakarma – By Dr Vasant C. Patil.
5. The American Psychiatric Association Publishing Textbook of Anxiety, Trauma and OCD-Related Disorders – Third Edition.