



## Ayurvedic management of cerebellar atrophy: A case study

Dr. S Rajalekshmi <sup>1\*</sup>, Dr. Ananta S Desai <sup>2</sup>, Dr. Surya S <sup>3</sup>

<sup>1</sup> P.G Scholar, Dept of P.G. Studies in Panchakarma, Government Ayurveda Medical College, Bangalore, Karnataka, India

<sup>2</sup> Professor and HOD, Dept of P.G. Studies in Panchakarma, Government Ayurveda Medical College, Bangalore, Karnataka, India

<sup>3</sup> P.G Scholar, Dept of P.G. Studies in Panchakarma, Government Ayurveda Medical College, Bangalore, Karnataka, India

\* Corresponding Author: **Dr. S Rajalekshmi**

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### Abstract

Cerebellum coordinates and regulates the movements of the body. Cerebellar atrophy is a condition characterised by degeneration of the cerebellum. Cerebellar atrophy results in impairment in day to day life activities since it alters the body movement, posture, gait and speech. In this case study, a 42 year old male patient approached OPD complaining of progressive decline in memory, occasional imbalance while walking and decreased sleep. The patient was treated with Shirodhara with Jatamansi Siddha Ksheera Dhara, Nasya with Jatamansi Siddha Taila for 7 days, Dhanvantaram Taila Talam, Sarvanga Abhyanga along with internal administration of Vidaryadi Kashaya, Chandraprabha Gudika and Dhanvantaram Gudika. The patient had significant overall relief of signs and symptoms of Cerebellar atrophy. This case study focuses on the effect of Ayurvedic Management Cerebellar Atrophy.

**Keywords:** Cerebellar atrophy, Shosha, Vatavyadhi, Ksheera Dhara

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### Introduction

Cerebellum which is located in the posterior cranial fossa forms about 10% of the weight of the cerebral hemisphere. Cerebellum plays a vital role in the regulation of eye movements, speech, limb movements, gait and cognitive operations <sup>[1]</sup>. Cerebellar atrophy is a disorder wherein Cerebellar neurons progressively weaken and result in disorders of fine movement, postures and motor learning in humans <sup>[2]</sup>. It is a structurally normal cerebellum with enlarged interfascial spaces in a posterior fossa of normal size <sup>[3]</sup>. Cerebellar Atrophy can be caused by idiopathic, vascular, autoimmune, traumatic, metabolic, inflammatory, infectious and neoplastic aetiologies <sup>[4]</sup>. It can be caused by various factors including inherited gene changes, chronic alcohol abuse and paraneoplastic disorders. Cerebellar dysfunction can result in gait disorders, difficulty with coordination and imbalance. Thus it causes a severe impact on the quality of life of the person. Preferred line of management of Cerebellar degeneration involves physiotherapy, occupational therapy and speech therapy <sup>[5]</sup>.

Ayurveda describes Doshas as the functional units of the body where as Dhatus are elaborated as the structural units. The equilibrium of the quality and quantity of body structures are essential as they maintain health. Ayurveda considers Shiras as the moola of the body<sup>6</sup>. It is also considered one among the Trimarma <sup>[7]</sup>. Acharya Charaka opines that diseases affecting Trimarma will be more complicated since the Chetana is attached to it more <sup>[8]</sup>. Majja dhatu can be considered as the dhatu unit of Masthishka. Acharya Bhela has describes that Manas is located in between Shiras and thalu <sup>[9]</sup>.

Shosha occurs when there is a functional as well as a structural degeneration. The three important aspects of dravya, guna and karma have to be regarded here. Panchakarma or the five therapeutic procedures deals with improving both the quality and quantity of these units. According to Ayurveda, Shiras is the location of Kapha as well as Prana vata <sup>[10]</sup>. Degeneration can result in depletion of Kapha and subsequent vitiation of Vata. Vata Vyadhi can affect Shiras when there is a pratiloma gati resulting in either degeneration or grave diseases. Ayurvedic literatures have given extensive description on management of Vatavyadhi. The efficacy of Ayurvedic medication in Cerebellar Atrophy is less explored. The management of Cerebellar atrophy through management of Vatavyadhi can contribute to the improvement of quality of life for an ailing person.

### Case Report

A 42 year old male visited the OPD eight months back complaining of progressive decline in memory, occasional imbalance of body while walking, occasional trembling of bilateral upper and lower limbs, irritability towards sound and a decreased sleep. He weighed 70 Kgs and a height of 165 cms. He is a graduate and currently working as an accountant. The patient feels tired even after talking for 2 minutes and get irritated on hearing loud noises. He has complained of occasional imbalance while walking. In the past 6 months this decline in memory was more evident and the verbal output has declined. There were evident changes in his behaviour turning him introvertive instead of being sociable before. The patient started showing indifference towards work and showed agony often. However there were no psychiatric manifestations. The patient was a non-smoker and had no history of alcohol consumption or drug abuse. Patient is non diabetic and non hypertensive and is suffering from chronic gastritis. The examinations were found to be normal and the gait was wide stanced. The MRI scan impression of the patient was Cerebellar atrophy along with small vessel ischemic changes noted in bilateral periventricular white matter.

The disease was diagnosed as Masthishka Kshaya manifested due to vitiation of Vata and kevala Vata chikitsa is administered according to Ayurvedic literatures.

### Treatment given

#### Shamana Oushadi

Ashta choornam for 3 days 5 gm TID

Vidaryadi Kashayam 60 ml bd (B/F)

Dhanvantaram Gudika I TID

Draksha Phantam 15 ml TID

#### Panchakarma Kriya

0<sup>th</sup> to 7<sup>th</sup> day: Sarvanga Abhyanga with Dhanvantaram Taila.  
: Shiro Pichu with Ksheerabala 101 Avartana Taila.

8<sup>th</sup> to 21<sup>st</sup> day: Shirodhara with Jatamansi Siddha Ksheeradhara for 14 days.

23<sup>rd</sup> day: Nasya with Ksheerabala 14 Avarti drops. (7days)

27<sup>th</sup> day: Virechana with Avipattikara Choornam (5 days)

The treatment was started with Ashta choornam for 3 days for Agni Vrddhi. The patient was also administered with Vidaryadi kashayam, Dhanvantaram Gudika and Chandraprabha Gudika as Shamana Oushadhi along with restrictions in diet. Shiro thalam was applied with ksheerabala101 avarthanam Tailam and Sarvanga Abhyanga with Dhanvantaram Taila followed by Ushna jala snana for 7 days. Then patient underwent shirodhara with Jatamansi Siddha Ksheera Dhara. Nasya karma was done with Ksheerabala Taila 14 Avarti for 7 days. On 26<sup>th</sup> day patient developed sensation of itching all over the body hence Virechana was advised from 27<sup>th</sup> day onwards for duration of 5 days. During discharge the patient was asked to continue shamana oushadi for one month.

### General Consent

The general consent from the patient was obtained before starting the treatment.

### Results and Discussion

Shosha is a condition which is manifested due to the vitiation

of Vata. In the current case stressful job of the patient demanded night awakening and skipping of meals. Due to these etiological factors, there was aggravation of Pitta Dosha associated with increase of vata Dosha. This aggravation resulted in Dhatu Kshaya impairing the day to day activities. In such conditions internal administration and external application of medications having Snigdha guna is the preferred line of management. The patient showed progressive decline in memory, occasional imbalance while walking, irritability on hearing loud noises and decreased sleep.

Initially the patient was administered with Vidaryadi Kashaya which is Vata Pitta shamaka by action. Dhanvantaram Gudika is Vata Anulomaka and Chandraprabha Gudika is Brmhana in nature. Ksheerabala Taila was selected for Shiro thalam as it was Vata hara in nature. The medicines were administered at bed time since it is best suited for diseases affecting the head. Nasal route of administration allows drugs which cross Blood- Brain-Barrier to enter CNS. In Shirodhara prolonged and intermittent stimulation of the oil provide afferent inputs to the cerebral cortex, leading to a tranquilizing effect. There was an overall improvement condition of the individual. After the treatment patient felt significant relief in his symptoms of irritation to sound, sleeplessness, imbalance of body after heavy work and trembling of bilateral upper and lower limbs.

### Conclusion

From this case report it can be assumed that Ayurvedic medications have a significant role in reducing the symptoms of Cerebellar Atrophy. The medication helped in improving the quality of life of the patient. The patient had significant relief in the symptoms of irritation to sound, sleeplessness. An integrated protocol involving Ayurvedic medication along with physiotherapy, occupational therapy and speech therapy can play a significant role in the management of Cerebellar atrophy.

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