



AYURVEDIC MANAGEMENT OF HIRAYAMA DISEASE - A CASE REPORT

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ABSTRACT

Monomelic amyotrophy or Hirayama disease, is a rare motor neuron disorder characterized by progressive weakness and atrophy in the distal upper extremities, typically beginning during adolescence. The condition involves asymmetric muscle atrophy in the hand and forearm, sparing the brachioradialis muscle, and is attributed to increased laxity in the dura mater, which causes the spinal cord to shift forward during neck flexion. This movement results in repetitive microtrauma to the lower cervical spinal cord, leading to muscle denervation. Diagnosis relies on postcontrast neutral and flexion magnetic resonance imaging, which reveals characteristic crescent-shaped enhancement and epidural flow voids. We report a case of HD in a male patient in his 20s with gradual bilateral upper limb weakness and wasting, confirmed by imaging and nerve conduction studies.

INTRODUCTION

Hirayama disease (HD) is an uncommon neurological condition that affects young men in their early 20s and is characterized by progressive wasting and weakness of C7-T1 innervated muscles of the distal upper limbs. Disease progression spontaneously halts within five years [1]. Rarely, upper motor neuron (UMN) signs such as exaggerated reflexes, increased tone, and sensory and autonomic abnormalities can be seen [2]. We report a case of a 16-year-old male patient with gradual and asymmetric bilateral upper limb weakness and wasting. Imaging and nerve conduction investigations established the diagnosis of HD.

CASE REPORT

The patient, Mr. Mohit, was N/K/C/O HTN, DM, Thyroid dysfunction was apparently normal one year ago when he first developed a sudden onset of tremors in the right hand. He was taken to Ilvala Ayurvedic Hospital, where he underwent one week of treatment (exact reports not available) after which the tremors partially subsided. However, over the next three months, the symptoms gradually progressed to involve other fingers of the right hand, followed by progressive weakness of the right thumb. He subsequently developed difficulty performing fine motor tasks such as holding a pen and paper, writing, and buttoning his shirt. Due to worsening symptoms, he consulted a neurologist on 24/01/2025, and an MRI of the cervical spine revealed features consistent with Hirayama disease (monomelic amyotrophy). He was advised vitamin supplementation for three months, but despite medication, the condition continued to deteriorate. Around eight months ago, he experienced a sudden episode of loss of consciousness while rising from a sitting position, associated with upward rolling of the eyes, for which he was taken to a nearby hospital and managed symptomatically; he was also advised protein supplements. Following this episode, his parents noticed further worsening of weakness. In the subsequent months, the patient

began experiencing shock-like pain in the nape of the neck with radiation of numbness and paresthesia into the bilateral upper limb and fingers. Due to the progressive nature of symptoms and functional impairment, the patient has now presented to our hospital for further evaluation and management.

CLINICAL FINDINGS

Patient was conscious, well oriented, and spoke normally. There was absence of pallor, icterus, cyanosis, clubbing and oedema. There were no any palpable lymph nodes. He had loss of strength and tremors in his upper limbs. Neurological examination revealed normal Cranial nerve functions, the tone of upper extremities was flaccid and grade 4 power was observed in (Right and left), Elbow flexion and extension, left wrist flexion (Right wrist flexion is 3/5) and Wrist extension. Finger abduction is absent in right hand and poor in left hand, Opposition of thumb is 3/5 on right and left hand, test of grip is poor on both the sides. Deep tendon reflexes were intact except knee jerk which is exaggerated and in sensory system examination 2-point discrimination is diminished in forearm. The sensory functions like pain, touch and temperature were normal. MRI of the cervical spine shows on flexion images there is mild anterior displacement of the dorsal dura with prominent epidural space, causing mild compression over the cervical spinal cord at C5 to C7 level. Serum Creatine Phosphokinase (S. CPK) was normal. Tenfold examination of patient suggested *Vatapitta Prakriti* (~physical constitution) *Avara Samhanana* (~medium body constitution), *Madhyama Sara* (~lowermost purest body tissue), *Avara Vyayam Shakti* (~lowermost capability to carry on physical activities), *Madhyama Abhyavarana* and *Jaranashakti* (~middlemost food intake and digestive power). *Mansavaha Srotodushti* was observed (Vitiation in micro-channels related to muscular tissues) in this patient. *Srotasa Pariksha* (examinations of other microchannels) revealed normal status of other *Srotasas*.



TREATMENT

- ✓ Greeva basti with Mahamasha taila

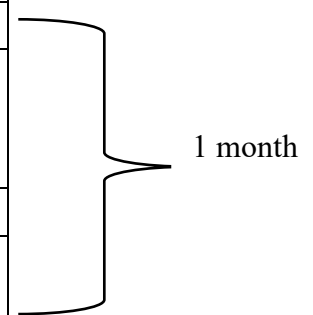
- ✓ Ubhaya urdwasaka abhyanga with Ashwagandhabala lakshadi taila followed by Shashtikashalipinda sweda
- ✓ Nasya with Ksheerabala 101 – 10 drops each nostril (from 30/10/25 – 13/11/25) for 15 days.

SHAMANUSHADHI

| Name of the medicine | Anupana and dose | Days |
|----------------------|---|-----------------------|
| Rasarajeshwara rasa | 1-0-1 after food | 30/10/2025-13/11/2025 |
| Navashwagandha | 10ml-0-10ml after food with equal quantity of hot water | 30/10/2025-13/11/2025 |
| Ajamamsa rasayana | 0-0-1 tsp with milk after food | 30/10/2025-13/11/2025 |
| Neurocare drops | 10 drops-0-10 drops with milk before food | 30/10/2025-13/11/2025 |

DISCHARGE MEDICINES

| Name of the medicine | Anupana and dose |
|---------------------------|--|
| Brihatvatachintamani rasa | 1-0-1 after food |
| Ashwagandharishta | 10ml-10ml-10ml after food with equal quantity of hot water |
| Ajamamsa rasayana | 0-0-1 tsp with milk after food |
| Neurocare drops | 10 drops-0-10 drops with milk before food |



OUTCOME

- ✓ Mild improvement was observed from parents and patient in lifting the hands.
- ✓ Muscle flaccidity is reduced.
- ✓ Mild improvement in hand writing.

Abhyanga with Balashwagandha Lakshadi Taila ^[3]

This Taila contains:

Kashaya - Bala, Ashwagandha, Laksha

Kalka - Rasna, Chandana, Manjista, Durva, Yastimadhu, Choraka, Sariva, Ushira, Musta, Kushta, Agaru, Devadaru, Haridra, Kumuda, Harenuka, Shatapushpa, Padmakshara.

Tila Taila

This Taila is used in different types of Vatavyadhi and this Taila is considered as Atyanta Pustikara, in the present study the patient is having Vata Vruddi and Mamsa Kshaya so this Taila is used for the Abhyanga to regain the strength by doing Vata Shamana.

Swedana with Shastika Shali Pinda Swedana ^[4]

Shastika Shali Pinda Sweda is a form of Sankara Sweda where the ingredients like Shastika Shali (Tridoshahara, Balya, Pushtikara), Bala Mula Kwatha (Burmhana), Ksheera (Balya) are used. Over all Shastika Shali is a type of Swedana which also gives Snigdhatta to the body and increases the Bala by controlling the vitiated Vata Dosha.

Mahamasha Taila ^[5]

It is a classical Ayurvedic medicated oil prepared with Masha as the chief ingredient along with Vata-shamaka, Balya and Burmhana drugs. It possesses Snigdha, Guru and Ushna properties that effectively pacify aggravated Vata Dosha and nourish depleted Dhatus. In Hirayama disease, which can be

correlated with Vata-dominant Vatavyadhi involving Greeva pradesha-Mamsa Kshaya, Mahamasha Taila acts locally on the cervical region. When administered in the form of **Greeva Abhyanga or Greeva Basti**, it improves local circulation, relieves Vata vitiation in the cervical spinal region. Its Burmhana and Balya actions help in nourishing Mamsa Dhatu, improving neuromuscular coordination of the upper limbs, and slowing disease progression, thereby making it beneficial in the management of Hirayama disease.

Brihatvata Chintamani ^[6]

It is a classical herbo-mineral formulation containing Svarna Bhasma, Rajata Bhasma, Abhraka Bhasma, Loha Bhasma, Pravala Bhasma, Mukta Bhasma, and Suta Bhasma, processed with suitable Bhavana Dravyas. This unique combination acts as a potent Rasayana and Balya, pacifies aggravated Vata, and nourishes depleted Dhatus. Being Ojovardhaka and Medhya, it is especially indicated in Dhaturkshaya, chronic neurological disorders, and debilitating conditions to restore vitality and enhance overall strength.

Ajamamsa rasayana ^[7]

This Rasayana mainly contains Ajamamsa (goat's meat) as the chief ingredient, processed with ghee, milk, Bala, Ashwagandha, Shatavari, Vidari, and other Rasayana dravyas. This formulation is highly nourishing and strengthening due to its Balya and Brimhana properties. It pacifies Vata Dosha and is especially useful in Vatavyadhi such as weakness, emaciation, neuromuscular disorders, and degenerative conditions.



Neurocare drops^[8]

This herbal formulation contains ingredients such as *Kshira* (Milk), *Taila* (Sesamum indicum / Sesame oil), *Bala* (*Sida cordifolia*) in both *Kwatha* (decoction) and *Kalka* (paste) form, processed in a decoction prepared from *Ashwagandha*, *Rasna*, *Shatavari*, *Pippali*, *Guduchi*, *Kushta* and *Erandamula*. This combination helps in all kinds of *Vatavyadhi* by controlling aggravated *Vata*, alleviating neuromuscular pain, strengthening nerves, muscles, ligaments and connective tissue; and used in *Dhatukshaya* to increase strength and improve repair of damaged tissue.

Ashwagandharishta^[9]

Ashwagandharishta is a classical Ayurvedic fermented formulation in which Ashwagandha (*Withania somnifera*) is the chief drug, supported by *Vata-shamaka*, *Balya*, *Brumhana* and *Rasayana dravyas* such as *Musali*, *Manjishta*, *Haritaki*, *Bibhitaki*, *Amalaki* and *Madhuka*, processed in a self-generated alcoholic medium. Ashwagandha, due to its *Snigdha*, *Guru* and *Ushna* *guna* and *Balya-Brumhana-Rasayana* actions, helps pacify aggravated *Vata Dosh* and nourishes *Mamsa* and *Majja Dhatu*. *Musali* and *Madhuka* further contribute to *Brumhana* and *Dhatu-varhdhana*, while the *Triphala* group aids in *Srotoshodhana*, improving tissue nutrition and drug bioavailability.

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