



Case Study

AYURVEDIC MANAGEMENT OF ALTERNATE HEMIPLEGIA OF CHILDHOOD - A CASE REPORT

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ABSTRACT

Alternate hemiplegia of childhood is a rare condition characterized by recurrent temporary episodes of hemiplegic attacks that affect one or the other side of the body. The clinical manifestations may begin at the neonatal period up to the age of 4 years. The reported prevalence is estimated at 1/100000 in children under 16 years old. There are, as of yet, no specific therapies that are uniformly effective in eliminating the episodes associated with AHC. AHC childhood can be correlated with Ayurvedic concept of *Skandagraha*. Here a case of 8 year old male child had come to our hospital with recurrent hemiplegic attacks having history of involuntary movements. At the end of 10days of IP treatment which included *Panchakarma* procedures along with internal medication resulted in 5-10% improvement in the overall effect of therapy. Followed by *Shamanachikitsa* 30-40% improvement was observed. Hence a humble attempt has been made to explore the case.

INTRODUCTION

Alternate hemiplegia of childhood is a rare, often severe, disorder that consists of flaccid hemiplegia affecting 1 or both sides lasting minutes to days, starting in the first 18 months of life^[1]. The reported prevalence is estimated at 1/100000 in children under 16 years old^[2]. The incidence and prevalence in India is not definitely established. Most cases are caused by mutations in the ATP1A3 while, rarely, a small clinical picture can occur as a result of mutations in ATP1A2 or in the glucose transporter 1 mutations.

In alternating hemiplegia of childhood, episodic hemiplegia affecting either side of the body is the hallmark of the disorder. However patients are also affected by episodes of dystonia, ranging from minutes to days in duration. On average, both features of the disorder commence at approximately 6 months of age.

Episodic abnormal eye movements are observed in a large proportion of patients (93%) with onset as early as the 1st week of life. AHC can be triggered by fluctuations in temperature, certain foods, or water exposure. Overtime, epilepsy and cognitive impairment emerge, and the involuntary movements change from episodic to constant. Infantile onset and paroxysmal nature of symptoms early in the disease course are key features to this diagnosis^[3]. There are, as of yet, no specific therapies that are uniformly effective in eliminating the episodes associated with AHC. But Flunarizine 2.5-15mg/day is used to reduce the frequency of the attacks.

But in our classics there is no pinpoint correlation related to AHC, but there are many conditions linked to such type of disease conditions described in different contexts. Some conditions which find an overlap of symptoms include *Vyadhija Phakka*, *Samvardhana Vikara*, *Sarvanga Roga*, *Ekanga Roga*, *Naigamesha Graha*, *Skanda Graha* etc. *Graha* is an umbrella term and collection of symptoms defined in Ayurveda classics. *Skanda graha*, one among the *Bala grahas* whose detail description is available in all major classics. The clinical features of *Skanda graha* closely resembles with AHC such as hemiplegic attacks of either side of body, episodes of dystonia, abnormal eye movements and involuntary movements.

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Case Report

Basic Information of the patient

Age- 8 years

Sex- Male

Religion- Hindu

Socioeconomic Status- Lower middle class

Parents: Father- Construction work, Mother- Housewife

Pradhana Vedana (Chief Complaints)

Temporary weakness of one side of body since 3 months of age with involuntary movements

Vedana Vritthantha (History of Present Illness)

A male patient aged 8 years was brought by non-consanguineous couple, born through elective LSCS with a birth weight of 2.9kg. Cried immediately after birth and discharged with no other post natal complications. He was said to be apparently normal till 3 months of life where parents noticed episodes of jerky movements of body with up rolling of eyes

Developmental History

followed by weakness of body. Parent took baby to nearby hospital and there they advised admission for 1 week and discharged with oral medications. But mother noticed similar episodes of attack preceded with excessive cry recurrently on either side of body which lasted for 2-3 days. Mother also noticed delay in milestones. Similar episodes of attack recurred every fortnight. At the age of 1&1/2 yrs, they consulted a neurologist in Mangalore where MRI brain done showed normal impression. There they were advised with oral medications such as syrup epilex & topaz tablet and parents were asked to do karyotyping which they refused. They continued medications for 2 years and by this frequency of episodes reduced but hemiplegic attack persisted on alternate sides. At the age of 3 yrs, EEG done showed no epileptiform discharges. Thus child was diagnosed as AHC and oral medications continued. But no marked relief from the symptoms thus they approached our hospital.

Gross motor	
Head control	3yr
Rolling over	9 m
Sitting with support	1 1/2yr
Sitting without support	4yr
Stands with support	5yr
Crawls	Mother couldn't recollect
Stands without support	6yr
Walks with support	6 1/2yr
Walks without support	Mother couldn't recollect
Climbing stairs	7 1/2yr
Runs	Mother couldn't recollect
Jumps	Mother couldn't recollect

Fine Motor Milestone	
Follows object at 90	Mother couldn't recollect
Follows object till 180	Mother couldn't recollect
Reaches object with both hands	1yr
Transfer objects	Mother couldn't recollect
Pincer grasp	2 1/2 yr
Releases objects	3yr
Scribbles circle	4 1/2yr
Balances one cube over other	Mother couldn't recollect
Vertical strokes	Mother couldn't recollect
Draws a circle	6yr

Language	
Babbling	6 m
Monosyllables	10m
Ten words	5yr
Combining words	5 ½ yr
Sentences	6yr
Can tell name	6yr

Social & Adaptive	
Recognizes mother	3m
Laughs loud	4m
Stranger anxiety	2yr
Taps image in a mirror	Mother couldn't recollect
Drinks from a cup	2yr
Recognizes body part	4yr
Bowel control	6yr
Bladder control	6yr

Clinical Findings

Systemic Examination

CVS-S1S2 heard, no murmurs

RS- b/l chest expansion normal, NVBS heard

GIT-P/A soft, no organomegaly

CNS

- HMF

Conscious and oriented to time, place and person

Memory –immediate; remote-intact

Speech- normal

- Cranial nerves-During the attack can't be elicited otherwise intact
- Motor system examination
 - Tone – Hypertonic during the attack otherwise normal
 - Bulk – Normal
 - Power –MRC scale



Table 1: Muscle Power of Upper and Lower Limb

During Attack		Without Attack	
Right	Left	Right	Left
UL- 4/5	UL-0/5	UL-4/5	UL-4/5
LL- 4/5	LL-0/5	LL-4/5	LL-4/5

- DTR- exaggerated on affected side during attack otherwise normal response
- Involuntary movement- Present
- Coordination – Romberg test negative without attack and can't be elicited during the attack
- Sensory system examination- touch, pain, temperature: perceived and normal without attack and not perceived during the attack
- S & E ADL scale
 - 1st visit-70%
 - 2nd visit-70%

➤ 3rd visit-80%

Diagnosis

- Alternating hemiplegia of childhood
- *Skanda graha*

Therapeutic Intervention

First Visit (12/07/2021): OPD level treatment

- Tab Brihatvatachinthamani rasa 1 BD
- Tab Brahmivati 1 BD
- Dhanadanayanadi Kashaya+ Gandharvahastadi Kashaya 15ml BD with lukewarm water for 10days

Second Visit (08/11/2021): IPD level treatment

External treatment

1. *Udwartana* with *Thriphala churna* for first 3 days
2. *Abhyanga* with *Ksheerabala taila* followed by *Shastika shalipinda sweda* for next 7 days
3. *Shirolepa* with *Yashtimadhu, Vacha, Amlaki, Jatamamsi* and *Brahmi taila*
4. *Yogabasti*

Mustadirajayapana basti- 250ml

Anuvasana basti with *Kalyanaka ghritha*- 20ml

Internal treatment

- Cap. Lashuna 3-0-0 on empty stomach
- *Balaswagandharista* 10ml BD

Advice on discharge

- a) Cap. Lashuna 3-0-0 for 15 days
- b) *Balaswagandharista* 10 ml BD for 1 month
- c) *Matrabasti* with *Prasarini Taila* 15ml for 7days
- d) *Abhyanga* with *Ksheerabala Taila* for 1 month

3rd VISIT (30/12/2021)

- Cap. Lashuna 1 BD for 30 days
- *Balaswagandharista* 15ml OD for 30days
- *Pratimarsha nasya* with *Ksheerabala* 101 -2 drops
- Cap. Palsineuron 1-0-0 for 30 days

Followup and Outcome

After the first visit there were no marked relief from complaints but the child became more active and appetite also improved. And the duration of hemiplegic attacks reduced to 1-2 days. After the IP treatment and follow up there were considerable improvement in the symptoms such as frequency of attacks reduced and the duration and severity of weakness also reduced. Parents also noticed improvement in involuntary movements and child became more active and power also improved.

DISCUSSION

Graha rogas are the most unique yet most debatable concept of *Kaumarabhritya*, one among *Ashtangas* of Ayurveda. Unfortunately it is neglected in today's era due to its mythological explanation and its difficulties in clinical understanding. But the importance of *Graha rogas* can be understood by the

detailed description by Acharyas Sushruta, Vagbhata, Haritha and Kasyapa. *Skanda graha* is well explained by Acharya Vagbhata and Acharya Sushruta than other Acharyas with special emphasis on its etiology, features and treatment. As AHC has symptoms like episodic flaccid hemiplegia attacks preceded by excessive cry, abnormal eye movements and involuntary movements etc which has resemblance with the symptoms of *Skanda graha*. Here the features are *Vata* predominant in nature thus treatment should be *Vataghna*. Acharya Sushruta has specifically explained *Vataghna* line of *Chikitsa* for *Skanda graha*^[4].

Acharya caraka has mentioned *Udwartana* under *Shareera parimarjana*^[5]. *Udwartana* helps to restores the deranged *Vata*^[6]. *Triphala* have *Katu tikta kashaya rasa* having *Ruksha* and *Tikshna gunas* and *Ushna virya* produces *Srotoshudhi*. *Abhyanga* will help in pacifying *Vata*^[7]. For *Abhyanga ksheerabalataila* is used, the indication of which says that potent enough for pacifying eighty *Nanatmaja vata vikaras*^[8]. As a part of *Swedana*, *Shastika shali pinda sweda* is opted which provides *Brihmana, Dhatu poshana* (provides nourishment to body tissues) and it is a prime procedure in mitigating *Vata*^[9]. *Shirolepa* is a procedure where medicinal powders are mixed with medicated oil and applied over the region of anterior fontanelae, since the drugs selected are *Medhya* (improves cognitive functions) in nature along with *Jatamamsi* having nootropic, anticonvulsant and neuroprotective activity^[10] and having *Karma* as *Bhutaghna*^[11]. *Basti* is considered as *Ardha chikitsa* and is the best treatment in the management of *Vatavyadhi*^[12]. Since the medicaments can directly reach the blood circulation as rectum has rich blood supply, the substances can directly absorbed into portal circulation^[13]. For *Matrabasti kalyanaka ghritha* and *Prasarini taila* is used, in which both are known polyherbal formulation used in neurological conditions and former having *Graharoga* as one among the indications^[14]. *Nasya* was done as *Shiras* is the *Uttamanga* involved and nasal cavity is highly vascularized therefore helps in avoidance of liver first pass effect, rapid absorption and higher bioavailability^[15] and the *Ksheerabala taila* 101 *Avarti* is known polyherbal preparation for *Vatahara* property. *Lashuna* having *Bhutaghna*^[16] as synonym possess *Rasayana* property and considered as best for *Vatavyadhi* by different Acharyas.

Various compound formulations like BVC tablet, palsineuron and *Brahmi vati* were used. Tab BVC has shown neuroprotective activity^[17]. *Brahmi vati* has various ingredients which have *Medhya* (nootropic), *Rasayana* (rejuvenative), *Nidrajanana* (sleep promoting), *Shothahara* (anti-inflammatory) and *Hrudya* (cardiotropic) effects.^[18]

CONCLUSION

The study highlights the efficacy of Ayurveda, an ancient tradition, where still many concepts are being unexplored. The treatment protocol followed here aims at reducing the frequency and severity of flaccid hemiplegic attacks and thereby improving the quality of life.

REFERENCES

1. Robert, M. (2016). Nelson Textbook of Pediatrics (Vol. 3). Elsevier.
2. Algahtani H, Ibrahim B, Shirah B, Aldarmahi A, Abdullah A. More Than a Decade of Misdiagnosis of Alternating Hemiplegia of Childhood with Catastrophic Outcome. Case Rep Med. 2017; 2017: 5769837. doi: 10.1155/2017/5769837. Epub 2017 Aug 16. PMID: 28900444; PMCID: PMC5576389.
3. Robert, M. (2016). Nelson Textbook of Pediatrics (Vol. 3). Elsevier.
4. G.D Singhal. (2007). Susruta samhita of Susruta (Vol 3). Chaukhamba Sanskrit pratishthan, Page no 168.
5. Shashirekha, H.K., & Bargale Sushant. (2017). Charaka samhitha (Vol 1). Chaukhamba publications. Page no 191.
6. G.D Singhal. (2007). Susruta samhita of Susruta (Vol 2). Chaukhamba Sanskrit pratishthan Page no 382.
7. Deepak Yadav. (2021). Vagbhatas astanga hridaya sutrasthana. Chaukhamba Surbharati Prakashan Page no 34.
8. Nishteswar, K., & Vidyanath, R. (2008). Sahasrayogam. Chaukhamba Sanskrit Series Office Page no 110.
9. Uppinakudru, Shailaja & G P, Mangala Jyothsna. (2020). Ayurvedic Management of Spastic Cerebral Palsy: A Case Study. International Journal of Research in Ayurveda and Pharmacy. 11. 1-4. 10.7897/2277-4343.110219.
10. Adiga, S. (2021). The Concept of Thalam in Ayurveda: An Analytical Approach. Journal of Ayurveda and Holistic Medicine (Jahm), 5(4). Retrieved from <http://jahm.co.in/index.php/jahm/article/view/35>
11. Prakash, L. & Harini, A. (2018). A Textbook of Dravyaguna Vijnana. Chaukhamba publications. Page no 391.
12. Shashirekha, H.K., & Bargale Sushant. (2017). Charaka samhitha (Vol 1). Chaukhamba publications. Page no 397.
13. Shukla, G.D. (2012). Pharmacodynamic understanding of Basti A contemporary approach. International Journal of Pharmaceutical & Biological Archive, 3.
14. Nishteswar, K., & Vidyanath, R. (2008). Sahasrayogam. Chaukhamba Sanskrit Series Office Page no 153.
15. Kumar, V. (2017). A Conceptual Study on Mode of Action of Nasya. International Journal of Ayurveda and Pharma Research, 5(7). Retrieved from <https://ijapr.in/index.php/ijapr/article/view/728>
16. Satish Chandra sankhyadhar. (2012). Raj nighantu. Chaukhamba orientalia. Page no 301.
17. Goshan V, Mundugaru R, Prakash N, Bhat S, Basavaiah R. Evaluation of neuro-protective activity of Brihatvata Chinthamani Rasa. The Journal of Phytopharmacology 2015; 4(4): 207-211.
18. Mishra, D., & Tubaki, B. R. (2019). Effect of Brahmi vati and Sarpagandha Ghana vati in Management of Essential Hypertension - A randomized, double blind, clinical study. Journal of Ayurveda and integrative medicine, 10(4), 269-276. <https://doi.org/10.1016/j.jaim.2017.04.001>

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