



## Short Communication

## Management of spastic cerebral palsy through multiple Ayurveda treatment modalities

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### Abstract

**Background:** Cerebral palsy (CP) is a leading cause of childhood disability affecting function and development. The global incidence of CP is 2:1000. It has been reported that children with CP and their caretaker have impaired health-related quality of life (QOL). Of the many types and subtypes of CP, none has any known cure. For a detailed description of the disease CP, though, there is no one to one correlation in Ayurvedic classics; it can be taken as *Vata Vyadhi* as far as its etiology and symptomatology are concerned. **Aim:** To assess the effect of certain Panchakarma procedures in the management of CP. **Materials and Methods:** Total 8 patients were registered and treated with 5 days of *Udvartana*, 5 days of *Abhyanga* followed by *Sarvanga Swedana* and then 8 days of *Yoga Basti*. The same course of treatment has been repeated for 3 times with an interval of 14 days. *Ashtanga Ghrita* was given during whole procedures as internal medication. Results of treatment were assessed with anthropometrical measurement, developmental milestone, Modified Ashworth Scale, spasm scale, reflex scale, and muscle power grading. **Result:** This Ayurvedic management shows good result in CP patients, especially by improving growth (height, weight, chest circumference) and development (head holding and sitting), reducing spasticity of left upper limb and muscle spasm. **Conclusion:** Multisystem approach is needed to improve the condition of the patient. Panchakarma along with internal medication should be given to improve all the facets of spastic CP. *Yoga Basti* acts by their own mode of action and can be used freely for such disease conditions.

**Key words:** Cerebral palsy, Panchakarma in pediatrics, *Yoga Basti*

### Introduction

Disabled children are of great concern to the family as well as the society. Cerebral palsy (CP) is the leading cause of chronic disability in children,<sup>[1]</sup> making them physically and mentally handicapped and socially apart. The worldwide incidence of CP is approximately 2.5 cases per 1000 live births.<sup>[2]</sup> For India, it is estimated around 3 cases per 1000 live births, but being a developing country the actual figure may be much higher. Among all the types of CP, spastic CP is the most common type, occurring in 70–80% of all cases.

Cerebral palsy is an umbrella term encompassing a group of nonprogressive, noncontagious condition that causes motor impairment by abnormalities in movement, posture, and tone.<sup>[3]</sup> It

can be caused by any of prenatal, natal, and postnatal factors and eventual pathology is any type of injury to the developing brain.

No effective treatment for the underlying brain damage has been formulated till today. All the sophisticated technology and highly expensive and complicated therapies of the medical research field have failed to find out a definite cure for the disease.

There is no exact correlation found for CP in Ayurvedic literature. While observing the etiology and clinical features, the predominance of *Vata* is obvious and put this disease entity nearer to *Vata* dominant conditions or *Vata Vyadhi*. While considering pathophysiology and management of Spastic CP it can be taken as *Avarana Janya Vata Vyadhi (Kaphavrita Vata)*.

Causative factors like inappropriate *Ritu* (ovulation period-menstruation period), *Kshetra* (uterus), *Ambu* (nutrition) and *Bija* (sperm and ovum),<sup>[4]</sup> *Dauhrud Avamanana*<sup>[5]</sup> (negligence of urges during *Dauhrud*-stage of pregnant women), presence of *Garbhopaghatkarbhavas* (food and regimen of pregnant lady which cause fetal anomalies),<sup>[6]</sup> incompatible *Garbha Vriddhikara Bhava* (factors responsible

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for fetal growth),<sup>[7]</sup> and improper following of *Garbhini Paricharya*<sup>[8]</sup> may have undesirable effect on the fetus in utero.<sup>[9]</sup> Moreover *Akala Pravahana* (inappropriate force) during labor, *Shiromarmabhighata* (head injury), defect in *Prana Pratyagamana* (neonatal resuscitation) process, *Ulbaka* (a type of disease), *Nabhi Nadi Vikara* (diseases of umbilical cord), *Graha Roga* (infectious diseases), improper *Shishu Paricharya*, etc., may play role as causative factor, during and after birth. These hamper normal growth and development of the child and cause many diseases, deformities, and even death.

In the previous research works, it is proved that internal medication along with Panchakarma procedures is more effective in comparison with only oral medications.<sup>[10]</sup> Hence, in the present study, Panchakarma procedures like *Udvartana*, *Abhyanga*, *Swedana*, and *Yoga Basti* are taken along with internal medication (*Ashtanga Ghrita*) were undertaken to evaluate the effect of multiple Ayurveda treatment modalities in the management of spastic type of CP.

## Materials and Methods

### Selection of patients

Prediagnosed cases of spastic CP, attending IPD of Kaumarbharitya Department, IPGT, and RA Hospital, Jamnagar were registered, after taking informed consent from parents/guardian, for the present clinical trial. The study was approved by Institutional Ethics Committee (PGT/7-A/Ethics/2010-11/1858; Dated 1.9.10).

### Inclusion criteria

- Children with spastic CP of 3–10 years of both sex
- Children with developmental disability of both physical and mental (delayed milestones).

### Exclusion criteria

- Children with major congenital disorders and with other types of CP like hypotonic, dyskinetic and athetoid
- Children with other diseases such as diabetes, acute infection, etc.

## Posology

### Internal medication

Dose of *Ashtanga Ghrita* was determined by using the reference of *Sharnghdharma Samhita*<sup>[11]</sup> after converting the ancient unit of measurement, that is, *Masha* into grams. *Aushadha Kala* was morning and *Anupana* (adjuvant) was *Koshna Jala* (luke warm water). *Ashtanga Ghrita*<sup>[12]</sup> or 58 days along with the procedures, except the days in which *Basti* was given.

### Panchakarma

- *Udvartana*: With lukewarm *Yava* and *Kullattha Churna* (20 min) for 5 days
- *Abhyanga*: With lukewarm *Bala Taila* (20 min) followed by *Sarvanga Nadi Sweda* (20 min) for 5 days
- *Yoga Basti* for 8 days, in which 1 *Anuvasana Basti* in beginning and then 3 set of *Anuvasana* and *Asthapana Basti* followed by 1 *Anuvasana Basti* at last were given. *Anuvasana Basti* was given with *Bala Taila* and *Madhutailika Basti*<sup>[13]</sup> was given as *Asthapana Basti*. The

dose<sup>[14]</sup> of *Basti Dravya* for *Asthapana Basti* are depicted in Table 1. *Anuvasana* was given ¼ of the quantity of *Asthapana Basti*.<sup>[15]</sup>

Such three courses were repeated with the interval of 14 days between each course. Total duration of the treatment is 82 days. Test drugs were procured from the Pharmacy, Gujarat Ayurved University, Jamnagar.

### Criteria for assessment

Anthropometrical measurement, developmental milestone, Modified Ashworth Scale (MAS),<sup>[16]</sup> spasm scale to assess intensity of spasm, manual ability classification system (MACS),<sup>[17]</sup> reflex scale to assess deep tendon reflex, and muscle power grading<sup>[18]</sup> were taken as assessment criteria to observe the effect of therapy.

### Assessment of total effect of therapy

Maximum Improvement: >75% improvement.

Moderate Improvement: >50–75% improvement.

Mild Improvement: >25–50% improvement.

No Improvement: ≤25% improvement.

### Statistical analysis

Statistical analysis was done by using student paired *t*-test.

## Observations and Results

Total 8 patients were registered in this study and 2 were dropped out, 6 patients completed the course of treatment. Out of 8 patients, 6 were quadriplegic and 2 were hemiplegic.

### Effect of therapy on developmental milestone

It shows significant results ( $P < 0.05$ ) in assessment parameters of head holding and sitting, while the rest of all parameters have shown insignificant ( $P > 0.05$ ) results [Table 2].

### Effect of therapy on anthropometrical measurement

It shows the significant result ( $P < 0.05$ ) in anthropometrical parameters, that is, length, weight, and chest circumference; whereas head circumference and mid-arm circumference have shown insignificant results [Table 3].

### Effect of therapy on motor system components

It shows significant results ( $P < 0.05$ ) in Left upper limb spasticity and all four limb spasm. Insignificant improvements

**Table 1: Age-wise dose for Asthapana Basti**

Age (in years)	Prasruta	Tola	g
3	1½	12	144
4	2	16	192
5	2½	20	240
6	3	24	288
7	3½	28	336
8	4	32	384
9	4½	36	432
10	5	40	480

were found in muscle power, spasticity grading (MAS) in rest of group of muscles, reflex scale, and MACS [Table 4].

## Discussion

Delayed development of gross and fine motor function may be due to a problem in normal function of *Vata* (*Pravartaka Cheshtanamucchavhanam*). Hence, to achieve results in developmental disorders, function of *Vata* (normal physiology) should come to normal. Here, *Ashtanga Ghrita* might have worked on central nervous system (CNS) by crossing BBB (Blood Brain Barrier-*Majja Dhara Kala*) because of its lipophilic property, thus stimulating higher mental functions (*Medha, Smriti* and *Buddhi*). *Udvardana* had given a well platform for further procedures like *Abhyanga*, *Swedana* and *Basti* by removing *Avarana* and *Srotorodha*.<sup>[19]</sup> *Abhyanga* and *Swedana* caused *Dosha Gati* from *Shakha* to *Koshtha*, which helped in removing vitiated *Dosha* through *Basti*. Finally, *Basti* helped to accomplish the effect of *Shodhana*. Thus by the combined effect of total therapeutic measures, *Avarana* was removed, *Mastulunga Majja* got nourishment, *Vata* came to normalcy, and hence the proper development of milestones were achieved.

Language is more of the function of *Udana Vayu* (*Vaka Pravrutti Prayatnorja*), which is normally situated at *Uraha Pradesh*,<sup>[20]</sup> insignificant result in this study suggests that *Basti* along with other Panchakarma procedures do not show complete correction in the function of vitiated *Udana Vayu* within study period. As this disease entity comes under *Asadhya Vyadhi*, the study period may not be enough to show the effect on language. Individualistic *Dosha* oriented practices like *Aushadha Grahana Kala* (*Sayam Bhojana Pashchat for Udana Vayu*),<sup>[21]</sup> *Swasthana*

*Dosha Chikitsa*, etc., might give better results in this aspect.

Personal and social development is more of the function of *Prana Vaya*<sup>[22]</sup> (*Buddhi, Indriya, Chittadhruka*). Insignificant result in this milestone suggests that the treatment protocol did not show effect to the persistent damaged *Murdha*. This milestone starts to develop in early infantile age, so the correction of this milestone requires early and prolonged intervention.

Growth is achieved by nourishment of *Rasadi Dhatus*. Here *Ashtanga Ghrita* might cause *Brumhana* by *Snigdha* (unctuous) and *Guru Guna* (quality), *Udvardana* opened the minutes channels and improved blood and lymphatic circulation, *Abhyanga* provided nourishment by its property like *Snigdha, Mridu, Bahala, Pichchhila* which are told as properties of *Brimhana Dravya*.<sup>[23]</sup> *Swedana* caused excretion of *Mala* (waste metabolites). *Snigdha Basti* (*Anuvasana* with *Bala Taila*) is told to have *Brumhana* effect.<sup>[24]</sup>

Spasticity is characterized by increased resistance by passive stretch, velocity dependent, and asymmetric about joints (i.e. greater in flexor muscle at the elbow and the extensor muscle at the knee).<sup>[25]</sup> This may happen due to *Avarana* of *Vata*, wherein, due to *Avarana*, *Vayu* cannot perform its normal function, that is, normal movement of joints (*Pravartaka Cheshtanam*). Initially, *Udvardana* helped in reduction of vitiated *Avarita Kapha* by its *Ruksha* and *Srotoshodhana* property. Once *Avarana* is removed, the aim of treatment is to pacify vitiated *Vata*. *Vayu* resides in *Sparshnendriya*, which is located in *Tvacha*, *Abhyanga* is quoted as *Tvachya*, so *Abhyanga* might work directly on *Vata* to bring it back to normalcy. *Basti* acts on CNS by stimulating ENS (enteric nervous system).<sup>[26]</sup>

Spasm was reduced significantly, which may be due to *Shamana* of *Vata Guna* like *Chala* and *Shita* by virtue of *Ashtanga Ghrita, Abhyanga* with *Bala Taila, Bashpa Sweda*, and *Mrudu Shodhana Aasthapana Basti*.

## Total effect of therapy

In majority of patients, total effect was found near 10–15%. As this disorder is incurable, this percentage of improvement also helps the patient to improve QOL. Treatment of this kind of condition is just like a pyramid, if we are able to make small improvement in an earlier age than it will reflect its major benefit in later age in the form of developing skills.

Previously it was believed that neurons do not repair or rejuvenate after any injury, but the new concept of neuroplasticity says that CNS have the ability to repair their neurons by axonal sprouting to take over the function of damaged neurons.<sup>[27]</sup> This improvement in patients also supports the concept of Neuroplasticity.

Hence, it is quite irrational to say “no improvement” (<25%) by following standard criteria for assessing the total effect of therapy.

## Conclusion

The selected Ayurvedic treatment modality is effective in relieving the signs and symptoms and thus reducing the disability in children with Spastic CP. Available research data

**Table 2: Effect of therapy on developmental milestone (n=6)**

Assessment parameters	Mean score			±SD	±SE	t	P
	BT	AT	X				
Head holding	3.16	2.33	0.83	0.98	0.40	2.07	<0.05
Sitting	4.16	3.5	0.66	0.51	0.21	3.16	<0.05
Standing	5.83	5.33	0.5	0.83	0.34	1.46	>0.05
Fine motor	5.16	4.83	0.33	0.51	0.21	1.58	>0.05
Language	4.5	4.16	0.33	0.51	0.21	1.58	>0.05
Personal and social	5.67	5	0.67	1.21	0.49	1.35	>0.05

AT: After treatment, BT: Before treatment, X: Difference, SD: Standard deviation, SE: Standard error

**Table 3: Effect of therapy on anthropometrical measurement (n=6)**

Components	Mean score			±SD	±SE	t	P
	BT	AT	X				
Length	82.83	84.33	1.5	0.83	0.34	-4.39	<0.01
Weight	9.33	10.45	1.12	0.54	0.22	-5.04	<0.01
MAC	13.5	14	0.5	0.54	0.22	-2.23	>0.05
HC	43.66	44.33	0.66	0.81	0.33	-2	>0.05
CC	49.16	50.5	1.33	0.81	0.33	-4	<0.05

MAC: Mid arm circumference, HC: Head circumference, CC: Chest circumference; AT: After treatment; BT: Before treatment; X: Difference, SD: Standard deviation, SE: Standard error

**Table 4: Effect of therapy on motor system components (n=6)**

Components of motor system	Mean score			±SD	±SE	t	P
	BT	AT	X				
Muscle power-left upper	3.16	2.83	0.33	0.51	0.21	1.58	>0.05
Right upper	3	2.83	0.16	0.40	0.16	1	>0.05
Left lower	3.5	3.33	0.16	0.40	0.16	1	>0.05
Right lower	3.16	3.16	0	0	0	0	>0.05
MAS-left upper	3.16	2.5	0.66	0.51	0.21	3.16	<0.05
Right upper	2.83	2.5	0.33	0.51	0.21	1.58	>0.05
Left lower	3	2.5	0.5	0.54	0.22	2.23	>0.05
Right lower	3	2.5	0.5	0.54	0.22	2.23	>0.05
Spasm scale-left upper	3	2	1	0.89	0.36	2.73	<0.05
Right upper	3	2	1	0.89	0.36	2.73	<0.05
Left lower	3	2	1	0.89	0.36	2.73	<0.05
Right lower	3	2	1	0.89	0.36	2.73	<0.05
Reflex scale-left biceps	1	1	0	0	0	0	>0.05
Right biceps	0.83	0.83	0	0	0	0	>0.05
Left knee	1.83	1.83	0	0	0	0	>0.05
Right knee	1.83	1.83	0	0	0	0	>0.05

AT: After treatment, BT: Before treatment, X: Difference, SD: Standard deviation, SE: Standard error, MAS: Modified Ashworth Scale

and references are not enough to explain the mode of action of *Ashtanga Ghrita* in precise way. Panchakarma with *Yoga Basti* are effective in improving growth (height, weight, CC) and development (head holding and sitting), reducing spasticity of left upper limb, and spasm in patients.

## References

- Datta AK, Sachdeva A, editor. Kuban, Leviton and Rosenbaum. *Advances in Pediatrics*. 1<sup>st</sup> ed. New Delhi Jaypee Publication; 2007. p. 623.
- Wrong Diagnosis Cerebral Palsy. Available from: [http://www.wrongdiagnosis.com/.cerebral\\_palsy/stats-country](http://www.wrongdiagnosis.com/.cerebral_palsy/stats-country), FMC (foothillsmedicalcentre). [Last cited on 2010 Oct 18].
- CDC. "Cerebral Palsy" National Center on Birth Defects and Developmental Disabilities. Available from: <http://www.cdc.gov>. [Last cited on 2010 Oct 18].
- Sushruta, Sushruta Samhita, Sharira Sthana, Shukrashonita Shuddhi Sharira, 2/33, edited by Yadavji Trikamji Acharya, reprint ed. Chaukhamba Sanskrit Sansthana, Varanasi, 2009; 348.
- Agnivesha, Charaka, Dridhabala, Charaka Samhita, Sharira Sthana, Mahatigarbhavranti, 4/17, edited by Yadavji Trikamji Acharya, reprint ed. Chaukhamba Prakashana, Varanasi, 2009; 320.
- Ibidem, Charaka Samhita, Sharira Sthana, Mahatigarbhavranti, 4/18; 320.
- Ibidem, Charaka Samhita, Sharira Sthana, Mahatigarbhavranti, 4/27; 321.
- Ibidem, Charaka Samhita, Sharira Sthana, Jatisutriya Sharira, 8/22; 344.
- Dodge NN. Cerebral palsy: Medical aspects. *Pediatr Clin North Am* 2008;55:1189-207, ix.
- Vyas A, Kori VK, Rajagopala S, Patel KS. Etiopathological study on cerebral palsy and its management by Shashtika Shali Pinda Sweda and Samvardhana Ghrita. *Ayu* 2013;34:56-62.
- Sharangadhara, Sharangadhara Samhita, Purva Khanda, 6/14-17, edited by Murthy KR, 5<sup>th</sup> ed. Chaukhamba Orientalia, Varanasi, 2003; 29.
- Vagbhata, Ashtanga Hridaya, Uttara Tantra, Balopcharaniya 1/43-44, edited by Tripathi B, reprint ed. Chaukhamba Sanskrita Pratishthan, Delhi, 2007; 884.
- Sharangadhara, Sharangadhara Samhita, Uttarakhanda, 6/28-30, edited by Murthy KR, 5<sup>th</sup> ed. Chaukhamba Orientalia, Varanasi, 2003; 219.
- Agnivesha, Charaka, Dridhabala, Charaka Samhita, Siddhi Sthana, Bastisutriya Siddhi, 3/31-32, edited by Yadavji Trikamji Acharya, reprint ed. Chaukhamba Prakashana, Varanasi, 2009; 695.
- Sushruta, Sushruta Samhita, Chikitsa Sthana, Netrabasti Pramana Pravibhaga, 35/18, edited by Yadavji Trikamji Acharya, reprint ed. Chaukhamba Sanskrit Sansthana, Varanasi, 2009; 526.
- Available from: <http://www.physiotherapy-treatment.com/modified-ashworth-scale.html>. [Last accessed on 2012 Feb 16].
- Carnahan KD, Arner M, Hägglund G. Association between gross motor function (GMFCS) and manual ability (MACS) in children with cerebral palsy. A population-based study of 359 children. *BMC Musculoskeletal Disord* 2007;8:50.
- Santosh K. *Pediatric Clinical Examination*. 2<sup>nd</sup> ed. Hyderabad: Paras Medical Publisher; 2010. p. 232.
- Sushruta, Sushruta Samhita, Chikitsa Sthana, Anagat Badhapratishedha, 24/51-52, edited by Yadavji Trikamji Acharya, reprint ed. Chaukhamba Sanskrit Sansthana, Varanasi, 2009; 489.
- Vagbhata, Ashtanga Hridaya, Sutra Sthana, Doshabhedhiya, 12/5, edited by Tripathi B, reprint ed. Chaukhamba Sanskrita Pratishthan, Delhi, 2007; 171.
- Agnivesha, Charaka, Dridhabala, Charaka Samhita, Chikitsa Sthana, Yonivyapada 30/299, edited by Yadavji Trikamji Acharya, reprint ed. Chaukhamba Prakashana, Varanasi, 2009; 646.
- Vagbhata, Ashtanga Hridaya, Sutra Sthana, Doshabhedhiya, 12/4, edited by Tripathi B, reprint ed. Chaukhamba Sanskrita Pratishthan, Delhi, 2007; 171.
- Agnivesha, Charaka, Dridhabala, Charaka Samhita, Sutra Sthana, Langhana Brimhaniya, 22/14, edited by Yadavji Trikamji Acharya, reprint ed. Chaukhamba Prakashana, Varanasi, 2009; 120.
- Ibidem, Charaka Samhita, Siddhi Sthana, Snehavyapatti Siddhi, 4/54;701.
- Dictionary Spasticity. Available from: <http://www.dictionary.webmd.com/terms/spasticity>. [Last cited on 2012 Mar 15].
- Shukla G, Pandey S, Thakar A. Pharmacodynamic understanding of Basti – A contemporary approach. *Int J Pharm Biol Arch* 2012;3:893-96.
- Trojan S, Pokorný J. Theoretical aspects of neuroplasticity. *Physiol Res* 1999;48:87-97.

**How to cite this article:** Bhinde SM, Patel KS, Kori VK, Rajagopala S. Management of spastic cerebral palsy through multiple Ayurveda treatment modalities. *Ayu* 2014;35:462-6.

**Source of Support:** IPGT and RA, Gujarat Ayurved University, Jamnagar, **Conflict of Interest:** None declared.

## हिन्दी सारांश

# स्पास्टिक सेरेब्रल पाल्सी की चिकित्सा में विविध आयुर्वेदिक चिकित्सा पद्धतियों का अध्ययन

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विश्व स्वास्थ्य संघटन (WHO) के मुताबिक विश्व में १० प्रतिशत जनसंख्या और भारत में पूरी जनसंख्या में से ३.८ प्रतिशत को किसी न किसी तरह की शारीरिक अशक्तता है। उनमें से लगभग १५-२० प्रतिशत बच्चे सेरेब्रल पाल्सी से पीड़ित होते हैं। निर्धारित आंकड़ों के अनुसार भारत में हजार जन्म लेते बच्चों में तीन बच्चे इस रोग से पीड़ित होते हैं और विकासशील देश होने के कारण अपेक्षित आंकड़ा और भी अधिक हो सकता है। आधुनिक टेक्नोलॉजी और विकसित नवजात शिशु परिचर्या के होते हुए भी बढ़ता हुआ यह आंकड़ा एक बड़ी चिंता का विषय है। जहाँ तक चिकित्सा और बचाव के तौर को देखा जाय तो आज तक कोई भी संतोषजनक मापदंड विकसित नहीं हुआ है। प्रस्तुत शोध आयुर्वेद चिकित्सा की उपादेयता का सकारात्मक परिकल्पना पर आधारित है। इस शोध में ८ रूग्णों को पंजीकृत किया गया, अष्टांग घृत को आभ्यंतर औषध के तौर पे ६८ दिनों के लिये अन्य पंचकर्म विधि जैसे कि उदवर्तन, अभ्यंग, स्वेदन, और योग बस्ति के साथ दिया गया। प्रस्तुत शोध में वृद्धि (वज़न, उंचाई एवं चेस्ट सर्कफेरन्स), विकास (हेड होल्डिंग, सिटिंग एवं फाईन मोटर), बाए हाथों की स्पास्टिसिटी एवं स्पासम में अच्छा सुधार पाया गया। यह व्याधि असाध्य है लेकिन आयुर्वेदिक चिकित्सा विज्ञान इन बच्चों के जीवन गुणवत्ता में सुधार और सर्वोत्तम जीवन प्रदान करके और अच्छी दिशा दिखा सकता है।