



# Approach of Ayurveda in Attention Deficit Hyperactive Disorder-A Single Case Study

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## Case Report

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## Abstract

Attention Deficit Hyperactive Disorder (ADHD) is one of the most common neurobehavioral disorders of childhood and often lasts into adulthood. Children with ADHD may have trouble paying behavior's (may act without thinking about what the result will be) or be overly active. It is normal for children to have trouble focusing and behaving at one time or another. However, children with ADHD do not just grow out of these behaviors. The cause and risk factors for ADHD are unknown, but current research shows that genetics plays an important role. Ayurvedic treatment with therapies aimed at improving brain function, enhance attention and mind calmness along with behavioral therapy, can be very helpful in ADHD.

**Keywords:** ADHD; Vata; Roga; Ayurveda; Mastishka Gata Vata

## Introduction

Attention Deficit Hyperactive Disorder (ADHD) is a chronic condition that affects millions of children and often persists into adulthood. Symptoms of ADHD include inattention (not being able to keep focus), hyperactivity (excess movement that is not fitting to the setting) and impulsivity (hasty act that occur in the moment without thought). The symptoms continue, can be severe and can cause difficulty at school, at home, or with friend. Because of unknown etiology, scientists are studying cause and risk factors in an effort to find better ways to manage and reduce the chances of a person having ADHD. Based on the symptoms, ADHD is co-related with Dhee, Dhriti and Smriti Vibhrams.

## Ayurvedic Concept

ADHD is not mentioned as an entity in Ayurveda. However some irregular behavior has been recorded in Ayurveda, that could possibly be linked with ADHD i.e. Dhee's vitiation, Smriti (memory) and Dhriti vitiation (the retaining/ intellect force of the mind). This causes irregular behaviour that leads to improper interaction between senses and their goals. This results in impulsivity, overactivity and inattention which are the distinctive features of ADHD. Memory is associated with the Dosha Sadhaka Pitta (monitors emotions and their effect on the functioning of the heart) and Prana Vata (controls the mind, sensory perception and brain). Vata Dosha controls the functions of movement, activity, the process of thought, expression, perception of sense objects, etc.

## Case Details

### Patient's Profile

- Age -5 year
- Sex -Male
- Religion -Sikhism
- Socio-economic status – Middle class
- Father's occupation – working in private sector
- Mother is House wife
- Chief Complaints: Delayed speech, behavior abnormality, less interaction with parents and family members, unable to sit in one place, hyperactive and poor eye contact since birth.

### History of Present Illness

Patient was delivered by lower segment caesarean section (LSCS) after 9 month and did not cry soon after birth. Patient was on ventilation for 10 to 16 hours. All the developmental milestones were normal except the speech but his parents noticed that he was hyperactive. His parents noticed that poor concentration, easily irritable, shouting unable to speak two words at a time. Associated complaints were poor eye movement. Common symptoms like parents had to become embarrassed due to their son's naughty behavior. Since then the parents started treating the child going to many doctors without any significant benefit. They approached us for further management.

### Family History

No significant family history and consanguinity found

### Treatment History

The child was on ventilation for 10 to 16 hours. He was undergoing physiotherapy, speech therapy, Play therapy, occupational therapy for 4 month. He was also given ADL (Activities of daily living) training. He was given allopathic treatment from AIIMS Rishikesh for 2 years.

### Birth History

- Full term LSCS was done. Baby did not cry soon after birth. Birth asphyxia, Bilateral mild hearing loss  
Birth weight was 3 kg
- NICU admission for 24 hrs. for observation.
- Mother observed after 1 year of age, post chicken pox vaccination; child did gradually unresponsive to sound when called.

### History of Immunization

Proper for age

### Personal History

- Appetite: Poor
- Thirst :Normal
- Bowel: Irregular
- Micturition: Normal
- Sleep: sound
- Nature of activity was always assisted

### General Examination

Vitals were normal. The general condition of the patient was moderate, nourished and afebrile and hyperactive. Respiratory system, cardiovascular system, and per abdomen examinations had shown no deformity.

### Asthtavidha Pariksha

- Nadi: Vata pradhana
- Mala: Nirama
- Mutra: frequency and colour were normal
- Jihva: Sama (coated)
- Sabda: Asamyaka
- Sparsh: Anushnasheeta
- Drik: Samyaka
- Akriti: Madhyama

### Central Nervous System Examination

Patient was diagnosed to have ADHD. CNS revealed that the child was conscious but not well oriented with time, place and person. Muscle power could not be elicited because the patient was unable to follow the command. Sensory system was intact and no abnormality was found. The examination of the patient was not possible to record properly as he was not stable in one place

### Diagnostic Assessment

The case was diagnosed as a hyperactive type of ADHD as per DSM -V criteria. In making the diagnosis, children should have six or more symptoms of the disorder. The parents of the childrens were contacted and the diagnosis was confirmed after detailed history taking from the parents.

## Treatment Protocol

Panchkarma therapies for 1st, 2nd and 3rd sitting:

- **First sitting:** 7 days  
Sarvanga Abhyanga: Ksheera Bala Taila  
Sarvang Swedana: Dashmoola Kwath
- **Second sitting:** 10 days  
Shiro Abhyanga with Ksheera Bala Taila

Anna Lepana with Shashtika Shaali

- **Third sitting:** 7 days  
Shiro Abhyanga with Ksheera Bala Taila  
Sarvanga Dhara with Ksheera Bala Taila  
Matra Basti with Ksheera Bala Taila (5ml)

There was a gap of 7 days in between 1st and 2nd and 3rd sitting

## Result

Sign and Symptoms	Before Treatment	After Treatment
<b>Hyperactivity</b>		
Not sitting in one place	Not sitting in one place for 5 min.	Sitting for 10-15 min. in one place
Sustaining attention in tasks and play activities	Difficulty in sustaining attention in tasks and play activities	Mild improvement in sustaining attention in tasks and play activities
Talking	Talking excessively	Now talking limitedly but sometimes talking nonstop
<b>Inattention</b>		
Eye contact while conversation	Less eye contact while conversation	Moderate increase in eye contact while conversation
Obeying commands	Every time not obeying commands	Sometimes not obeying commands
Regarding task focus	Start task but quickly lose focus	Now focus increased in tasks
<b>Impulsivity</b>		
Having trouble waiting for his turn	Every time having trouble waiting for his turn	Sometimes having trouble waiting for his turn
Controlling anger	Trouble in controlling anger	Tries to control anger

**Table 1:** The observation and result based on clinical picture was noted before and after the course of treatment is as given.

## Discussion

The child presented with the complaints of prominent hyperactivity as per DSMV criteria. In ADHD, vitiation occurs in Vata, Dosh that simultaneously vitiates Pitta and kapha Dosh. The pathology of ADHD is not clear in the contemporary system of medicine other than the neuro-behavioural outlook. In Ayurveda, any disease is said to have root at mental, physical or both phases. In these cases, the aetiology is the pshycho-somatic. In Ayurveda both Tridosha leads the mind and body and the vitiation of these Doshas will cause an abnormality of both psyche and body. Vata Dosh is the main among Tridosha which has much control over mental functions such as initiation, direction and stimulation of thoughts and related actions. In the present case, the normal function of Vata was affected, in turn leading to hyperactivity in the child.

By using the above details as a guide, planning of treatment and selection of drugs were made in the present case based upon the main Dosh involvement. First of all to control the vitiated Vata and Pitta Dosh, oleation therapy was given to the child. So Sarvanga Abhyanga with ksheera Bala Taila and sarvanga mridu swedana with Dashmoola Kwath was done for 7 days. Lipophilic drugs are said to have properties to cross blood – brain barrier due to which medicated oil might have acted as a cognitive modifier. The touch receptors stimulated by external oil massage had helped in calming down the hyperactive child. There will be a gap of 7 days after completion of first therapy.

After that Shiro-Abhyanga with Ksheera Bala Taila along with Anna lepana with Shashtika shali was done. Shiro-Abhyanga is a gently massage by finger tips on the scalp, so the oil formulation on this part of the body takes effect. Head

is the operational centre of the entire body which is the seat of consciousness and the sense organs with which we interact. Adhipati, Simantaka, Krikatika, Vidhura and Shankha Marma reside in head. Stimulation of these Marma points helps in relieve stress, improve blood circulation, nourishes skin and detoxify the body. Shiro- Abhyanga is predominantly a treatment used for the prevention of psychosomatic disorder. Hence Abhyang with ksheera Bala Taila is said to be effective due to its properties such as Snigdha Guna which acts through its Vatahara properties.

In the study of Sembulingum, et al. the effect of Shiro-Abhyanga has been assessed, which says that during Shiro-Abhyanga different types of mechanical sensation is given to the skin like pressure, rubbing, touches etc. so, these sensory impulses are received by respective receptor present on the surface of skin and carried to the hypothalamus in the brain [1].

Anna lepana is a type of treatment in which Shashtika Shali cooked in the milk which has already been processed with Bala kashayam (Decoction prepared by boiling the roots of Sida cordifolia with water) is rubbed against the body of patient. is a treatment in which a special kind of pudding is prepared with Shashtika Shali, is smeared over the whole body and wiped off after half a Yama. It was done daily for 10 days taking about 30 -40 minutes. It provides warmth to joints and muscles of the body and enhances nutrition to the body especially bones, muscles, and other soft tissues. It also strengthens the whole body. After 7 days of Shiro-abhyanga and Anna lepana, there was a gap of 7 days. After that continued with Shiro-abhyanga, Sarvanga Dhara and Matra Basti with Ksheera Bala Taila for 7 days.

Basti is a purification process by which all the three vitiated Doshas are expelled from the anal route and especially Vata is pacified. Basti is also called to be primary modality of treatment in Vata dominance disorder or the disorder of nervous system by expelling the toxins and by maintaining the balance in Doshas. Basti Dravyas may activate the Neuro-humeral transmission by stimulating the Gut brain axis, regulating changes in behaviour and emotions. Also, Rajo-guna is more predominant in ADHD. This guna usually controlled Vata Dosha [2]. Hence when Vata Dosha is controlled, correction of Rajo Guna occurs. Hence Basti proves to be effective in this case.

### Ksheera Bala Taila

Ksheera Bala Taila prepared from Go-ksheera (cow's milk), Bala and Tila Taila. Cow's milk contains all the elements necessary for the growth and nutrition of bones, nerves, muscles and other tissues of the human body. All

the three ingredients possess Madhura Rasa and Vipaka. Madhura Rasa mitigates both Vata and Pitta Dosha. it is Dhatunaamprabalam (strength to the tissue) and is good for sense organs and pleasing the mind. It nourishes the body and plays a major role in promoting life. Ksheera Bala Taila is said to have pacifying effects on all the eighty chronic conditions of Vata origin (Vata Nanatamja Vikara) [3].

Ksheera Bala Taila is being utilized as a Rasayana drug in conventional Ayurveda treatment. The continuous administrations of this formulation prevent the release of abrupt electric electrical discharge and improve the physical and mental condition of the patients. It has profound soothing and relaxing effect on mind [4].

After the first course of treatment, the appetite of the child got improved but there was no improvement in hyperactivity and other symptoms of child. After the completion of 2nd sitting mild changes in hyperactivity and irritability was noted. Mother told that the child could sit at one place for some time. After the 3rd sitting, there was a significant improvement in hyperactivity, inattention and poor eye contact. The child can also tried to tell his full name and follows the command given by his parents. While during conversation with parents and other family members, child tries to do eye contact for some time.

### Conclusion

ADHD is a neurobehavioral disease where the behavior is affected greatly in child. The present case demonstrated the role of Ayurveda in managing hyperactive type of ADHD. Ayurveda has a collection of wonderful herbal medication and some Panchkarma therapies discussed above showing significant result in controlling the symptoms of ADHD and the child well tolerated the therapies. It can be concluded that Ayurvedic treatment can be safely employed to treat ADHD.

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