

## An Ayurvedic Approach towards ADHD in Children

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#### Abstract

Attention Deficit Hyperactivity Disorder (ADHD) is the most common neurobehavioral disorder in children, estimated to affect 3-5% of School aged children, particularly boys. It is characterized by difficulty in paying attention, difficulty in controlling behavior and hyperactivity. In ayurvedic text, there is no direct disease mentioned that can be correlate with ADHD but we can compare it with Vata Vikara (disease due to Vitiated vata-dosha responsible for movement and cognition). The importance of Ayurveda in managing ADHD lies in its holistic approach, focusing on balancing the mind and body through natural medication, life style changes, and personalized treatments. Ayurveda focuses on preventive measures also for healthy progeny before conception by using detoxification Panchkarma therapies according to Prakruti. Panchakarma helps in improving the quality of progeny. It not only improves the quality of life of child suffering from Neuro-development disorders, but also relieves the physical, mental and social stress of the custodian. This article aims to approach towards ADHD through Ayurvedic management as it cures root cause and gives significant effect in managing sign and symptoms.

Keywords: ADHD, Vata pradoshaja Vikara, Ayurvedic management, Panchkarma Therapies.

#### Introduction

ADHD (Attention Deficit Hyperactivity Disorder) is a chronic neurobehavioral disorder characterized by symptoms of inattention, hyperactivity, impulsivity, or combination of these symptoms. It is typically diagnosed in childhood but frequently has long term implications, including decreased likelihood of high school and postsecondary graduation as well as poor peer relations [1]. The cause is Multifactorial in origin with genetic, neural, and environmental contributions. There are many studies that suggest variable degrees of genetic association with ADHD. The mean worldwide prevalence of ADHD is between 5.29% and 7.1% in children and adolescents (<18 years) [2]. The prevalence of ADHD in India among primary school

Children were found to be 11.32%. Prevalence was found to be higher among the males (66.7%) as compared to that of females (33.3%). The prevalence among lower socioeconomic Group was found to be 16.33% and that among middle socioeconomic group was 6.84%. The prevalence was highest in the age group 9 and 10 years [3].

## Classification of ADHD [4]

Class 1: Hyperactivity, impulsiveness and inattentiveness (most common)

Class 2: Hyperactivity and impulsiveness only

## Class 3: Mainly inattentiveness (Uncommon)

**Diagnostic Criteria:** The two main guidelines used for the diagnosis of ADHD are DSM-V <sup>[5]</sup> and an ICD-10 <sup>[6]</sup>. DSM-V criterion is followed more because of its broader spectrum<sup>7</sup>.

## DSM-V Criteria for ADHD [8]

In making the diagnosis, children should have six or more symptoms of the disorder and people above 17 should have at least five symptoms.

## The Criteria of Symptoms for a Diagnosis of ADHD Inattentive Presentation

- Does not give close attention to details or makes careless mistakes.
- Has difficulty sustaining attention on task or play activities.
- Does not appear to listen when directly spoken to.
- Struggles to follow through on instructions and does not finish school work etc.
- Has trouble organizing tasks or activities.
- Avoids or dislikes tasks requiring sustained mental effort.
- Loses things needed for tasks or activities.
- Easily distracted.
- Forgetful in daily activities.

## **Hyperactive-Impulsive Presentation:**

- Fidgets with hands or feet or squirms in seat.
- Has difficulty remaining seated.
- Runs about or climbs excessively (in children); extreme restlessness (in adults).
- Difficulty engaging in activities quietly.
- "On the go", adults will often feel inside like they were driven by a motor.
- Talks excessive.
- Blurts out answers before questions have been completed.
- Difficulty in waiting his/her turns.
- Interrupts or intrudes on others.

## **Combined Inattentive & Hyperactive-impulsive Presentation:**

• Has symptom from both of the above presentations.

## Treatment of ADHD in Modern [9]

- i). Behavioral Management
- ii). Stimulant Medication
- iii). Non-Stimulant Medication

### Prognosis of ADHD [10]

Prognosis is favorable, many children doing well in adulthood if they are properly treated.

The presence of Aggression in childhood a predictive symptom of adult psychopath in the form of sociopathy, hysteria and alcoholism.

#### **Aims and Objectives**

- To review the literature for Modern and Ayurvedic perceptive of ADHD.
- To study the mode of action of Medhya herbs and medication in the management of ADHD.
- To study effect of Panchkarma therapies in the management of ADHD.

## **Materials and Methods**

Classical texts of Ayurveda like Charaka Samhita and Sushruta Samhita, and modern textbooks

Including digital media, Ayush Research Portal, Pub Med, Google Scholar, and other websites on the internet regarding.

## **Ayurveda Perspective**

According to Ayurveda, Vata dosha is responsible for all types of movements in the body and ADHD is a condition in which there is imbalance in physical and mental activity occurs. Thus, it is the result of vitiation of Vata dosha is mainly responsible with Pitta dosha. Acharya Charaka states, if vyana vayu is accumulated by prana vayu then there will be loss of all senses and affect on memory, also importance of DHI (grasping power), DHRUTI (analysis power) & Smriti (memory) which are mental faculties that play a crucial role in cognitive function and overall well-being, imbalance in these lead to inattention, hyperactivity, and impulsivity<sup>11</sup>. So

management includes pacification of mainly Vata Dosha with Panchakarma therapies and medication which acts on mental faculties.

## An Ayurvedic Approach in Management of ADHD

- 1. Nidana Parivarjana [12]: By avoiding the causes of the disease, whether they are Ahara, Vihara, or both, it aids in both its prevention and cure. Further by avoiding specific Nidana, the Nidana Parivarjana also aids in halting the evolution of the illness. Acharya Charaka and Acharya Sushruta both recommended avoiding the causes of all diseases as the first step in treating them, as doing so also helps to ward off future illnesses. In ADHD mainly avoid of Vata dosha vrudhikar Ahara, Vihara causing vitiation of Vata Dosha. In children, avoid intake of salty chips, bakery products and over drink of milk and milk products.
- 2. Deepan and Pachan [13]: The principle corrects Pachakagni and digests Ama. Thereby it corrects. The appetite, clears the channel obstructions by removing Ama, and aids proper nourishment to All Dhatus. ADHD symptoms often linked to Vata imbalance, particularly Chal guna of Vata. Deepan and Pachan can help balance Vata by improving digestion and reducing ama, which can contribute to Vata aggravation. Acharya Charaka has described Deepaniya Mahakashaya i.e., Pippali, Pippalimula, Chavya, Chitraka, Adarak, Amlavetasa, Maricha, Ajamoda, and Hingu which can be used for the above purpose.
- 3. Medhya Rasayana <sup>[14]</sup>: The term "Medhya Rasayanas" is derived from the Sanskrit words "Rasayana," which means rejuvenation, and "Medhya," which means intellect or cognition.

Medhya Aushadhi enhances Dhee, Dhriti, and Smriti individually. Hence to do this, drugs with Manda, Sthira, Sthula guna of Prithvi Mahabhut and Medhya Guna required for balancing Tridosha and to improve cognitive functions of brain. Medhya Rasayana drugs are used for Prevention and treatment of mental disorders of all age groups. Medhya Rasayana is a group of four medicinal plants that can be used singly or in combinations [15]. They are Mandukaparni (Centella asiatica Linn.), Yastimadhu (Glycirrhiza glabra Linn.), and Guduchi (Tinospora cordifolia (Wild) Miers) and Shankhapushpi (Convolvulus pleuricaulis Chois), specially mentioned with a Wide range of applications on different systems.

# The Formulation of Medhya Rasayana Drugs is Two Types:

- i). Shita Virya and Madhura Vipak: It promotes kapha and enhances "Dharana Karma" (retention of cognition) e.g., Yastimadhu, Brahmi, Shankhapushpi etc.
- ii). Ushna Virya and Tikta Rasa: it promotes pitta and enhances Grahana and Smarana (i.e., grasping power and Memory) e.g., Guduchi, Vacha, Jyotishmati, etc

Table 1: Showing Medicinal properties of Medhya drugs.

Sr. No	Drug Name	Latin Name	Rasa,Virya,Vipak	Doshaghnta	Pharmacological Action
1.	Mandukaparni [16]	Centella asiatica Linn	Tikta, kashaaya Sheeta virya Madhura vipak	Kapha-Pitta shamak	Cognitive and antioxidant properties, Anti- nociceptive and anti-inflammatory, Memory enhancing
2.	Yashtimadhu [17]	Glycirrhiza glabra Linn.	Madhura Sheeta virya	Vata-Pitta shamak	Medhya, Glabridin enhances memory, Anti- depressant

			Madhura vipak		
3.	3. Guduchi [18] Tinospora cordifolia(Wild) Miers		Tikta, kashaaya Ushna virya Madhura vipak	Tridosha shamak	Neuro-protective activity Antioxidant activity, Anti-stress activity, Learning and memory enhancing activity
4.	Shankhapushpi [19]	Convolvulus pleuricaulis Chois	Tikta Sheeta virya Madhura vipak	Tridoshahar Mainly- Vata-Pittahar	Effect on learning, memory and behavior, Anxiolytics, Brain nourishment

Table 2: Showing Medicinal properties of drugs can be used in ADHD.

Sr. No.	Drugs	Description		
1.	Kalyanak Ghrita <sup>[20]</sup>	Is polyhedral medicated Ghrita consisting of extract of 28 different herbs, indicated in management of psychosomatic disorders like Unmad, Apsmar and other mental disorders.		
2.	Mahakalyanak Ghrita [21]	Particularly nourishing (bulk promoting) and an excellent alleviator of Sannipataja Rogas.  Mahakalyanak Ghrita controls the Pitta and also this Ghrita helps in increasing the cognitive power.		
3.	Brahmi Ghrita [22]	It is widely used as medicine and also preparatory procedure called snehakarma for improving learning skills, intelligence, memory, and speech.		
4.	Suvarnaprashan [23]	Suvarnaprashan is a comprehensive Rasayana Chikitsa, administered for physical, mental, intellectual and spiritual wellbeing of the children		
5.	Saraswatha Arishta [24]	Is the best memory and immunity booster tonic, used in psychological conditions, Epilepsy, and insanity, and improves speech.		

#### 4. Panchkarma Therapies in ADHD

- i). Abhyanga <sup>[25]</sup>: All over body oil massage is done in the classical method that helps to relieve vata dosha, which is responsible for hyperactivity in children's, it relaxes the body's muscles, and calms the mind.
- ii). Murdha Taila <sup>[26]</sup>: Murdha Taila or Application of oil to the head. It is form of Bahyasneha or external oleation therapy, where oils are applied to scalp for specific duration to promote healing and well-being. It consists of four different procedures, any one of which can be used for the purpose.
  - a) Shirodhara-(Continuous pouring of oil on forehead fo specific time)
  - Shiropichu (Placing a cloth soaked in oil on the head)
  - c) Shiro-abhyanga (oil massage on head)
  - d) Shirobasti (retaining oil in a cap on the head)

These all procedures comprise of application of medicated oil on the head following a slight massage. Application of oil as-Chandan-bala-lakshadi, Kshirabala, Ashwagandha on Head causes the pacification of Vata which is responsible for the impulsive behavior and it is also told as Indriya Prasadana (sense organs able to function normally) [27]. It nourishes the Indriyas and increases blood circulation to brain so that cognitive functions and mental activity can be enhanced. It gives stability to Mana, increases Dhee, Dhriti and Dharana shakti. Since Prana vayu, Mana, Indriyas, Manovaha srotas all located in Shira, it may prove effective in ADHD.

- iii). Basti: Basti is considered as Ardha chikitsa by Acharya Charaka. It balances Vata Dosha. In a study, it proved that Matra basti with Kshirabala oil and Mahanarayan oil was quite effective in the amelioration of clinical features of ADHD in children<sup>28</sup>. It was found effective to break the pathogenesis of ADHD.
- iv). Nasya [29]: As the Nasya is the door to Shira (Nasa hi Shirso Dwaram). The drugs administered via it, reaches to Shringataka marma, which stimulates the nerve endings, sends impulses to the Brain, and increases the blood circulation. Thus, the vitiated Doshas gets expelled out.

## 5. Pathya-Apathya According to Ayurveda [30]

In the management of the manovyadhi satvik ahara ultimately increases the Sattva guna.

#### Pathya-Ahara

- Freshly prepared food which is not too spicy food, too hot, sour or too cold.
- Whole grains
- Fresh fruits
- Dry fruits
- All the pulses
- Petha/Kohala

#### Apathya-Ahara

- Avoid Dairy products
- Avoid processed food and Bakery products
- Avoid packed drinks
- Avoid fried items
- Avoid colored food likes-candies, gems, chocolates, jellies.

## 6. Yoga and Pranayam in ADHD [31]

Yoga and Pranayam can be beneficial for managing ADHD symptoms by improving focus, reducing hyperactivity and promoting emotional regulation. It also enhanced cognitive functions.

#### Yoga Poses-

- Tree Pose: This pose helps improve balance and focus.
- Cat-Cow Pose: This pose helps improve spinal flexibility and co-ordination.
- **Downward Facing Dog:** This pose can help calm the mind and improved focus.

#### Pranayam (Breathing Exercises)-

- Anuloman Viloma (Alternate Nostril Breathing): This technique helps calm the nervous system and improves focus by regulating the breath.
- Breath of Joy: This practice combines movement and breath, offering a way to ground energy and promotes relaxation.

#### Discussion

An Ayurvedic approach towards ADHD involves Nidan Parivarjan, Deepan-Pachan, Medhya Rasayan and Specific Panchkarma therapies. Along with above, supportive therapies like Yoga, Pranayam also included. For correction of root cause and to avoid recurrence of disease Ayurveda focuses on Diet and life-style changes which helps for long term effect.

#### Conclusion

It is concluded from above study that Ayurveda has a holistic approach in treating ADHD in Children without any side effects, targeting not just the symptoms bit overall well-being of the individual. By focusing on Panchkarma therapies, herbal medication, diet-life style modification and mind-body practices. Ayurveda aims to restore balance in the body and mind, prompting focus, calmness and improved control over impulses.

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