



ATTENTION DEFICIT HYPERACTIVITY DISORDER (ADHD): AN AYURVEDIC REVIEW

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ABSTRACT

Children's mental health is increasingly becoming a top priority due to the rapid rise in mental illnesses. One such complicated neuro-behavioral illness is attention deficit/hyperactivity disorder (ADHD). It has a negative impact on child's life as well as the family's finances, social dynamics and overall peace. *Unmad* is a type of *Mansik-vyadhi* which is the most common form of mental disorder. *Unmad* can be co-related with attention deficit hyperactivity disorder (ADHD). Children with psychosomatic disorders are more frequently seen in paediatric clinics in the present period, with attention deficit hyperactivity disorder (ADHD) being one among them. This disorder is caused by several factors, including poor impulse control and a lower ability for self-inhibition, increased distractibility and trouble maintaining concentration, motor hyperactivity and restlessness etc. When diagnosed using DSM-5 criteria, ADHD is predicted to afflict 2-17% of Indians and 9.7% of Jaipur residents who are 12 years of age or younger. The DSM-5 states that impulsivity or hyperactivity along with persistent patterns of inattention is the hallmarks of attention-deficit/hyperactivity disorder. There is currently no satisfactory alternative therapy for this illness in modern medicine other than presynaptic dopaminergic agonists. *Ayurveda*, a conventional branch of medicine, offers the most potent remedy for this ailment. The present article is an attempt to highlighting on details & management of *Unmad* whose symptoms mimic with ADHD.

Keywords: *Unmad*, *Ayurveda*, *Mansik- vyadhi*, ADHD.

INTRODUCTION:

Attention Deficit/Hyperactivity Disorder (ADHD) is a neuro-developmental disorder that generally affects 7.1 million children (11.4 percent), or approximately 1 in 9 children.^[1] It is characterized by persistent patterns of inattention, hyperactivity and impulsivity that interfere with daily functioning or development. Attention deficit hyperactivity disorder (ADHD) is characterized by inattention, hyperactivity, forgetfulness, impulsivity, and distractibility.^[2] 5-10% of Indian

population is affected by this disorder with male predominance.^[3] Several factors including both genetic and environmental lead to ADHD. A significant hereditary component is a crucial element that causes the illness. The child's mother may have experienced difficult deliveries, toxemia, or protracted labour in the past. Drug misuse and a mother's addiction have also been identified as risk factors.^[4]

In Ayurveda, all mental illnesses are included under the term "*Manasvyadhi*." Due to vitiation of *Dhee (intellect)*,

Dhriti(cognition) and *Smriti* (recollection) there is an imbalance of *kala* and *karma*. Incorrect interaction of the senses with their objectives i.e. *Asatmendriyartha samyoga* cause impulsivity, hyperactivity, and inattention.^[5] Although, there is no direct correlation of ADHD with *Unmad*. Still, ADHD symptoms such as inattention, hyperactivity and impulsivity can overlap with symptoms described under *Unmad*. Particularly, when considering the mental disturbances and erratic behaviour are often associated with both conditions.

ADHD is the most prevalent neurobehavioral condition and first-line treatment include CNS stimulants, antidepressants, Alpha 2 agonists and nor-epinephrine reuptake inhibitors. A single stimulant medicine has a response rate of about 85%. There is no satisfactory treatment in any other system of medicine except in Ayurveda that provides a comprehensive understanding of its aetiology and treatment, dating back to the Vedic and *Samhita* periods. The Ayurvedic treatment of ADHD involves correction or balancing of *tarpaka kapha*, *sadhaka pitta*, *prana vayu*, and *doshas* present in the brain. Nootropic herbs like *Ashwagandha* (*Withenia somnifera*), *Brahmi* (*Bacopa Monierii*), *Shankapushpi* (*Convolvulus puricaulis*), *Jatamansi* (*nardostachys jatamansi*) have possible action on psycho-neurological deficits. *Panchakarma* procedures like *Abhyanga* (oil massage), *Shirodhara* and *Shiro Pichu*, *Nasya* (Nasal administration of drug), *Basti* (enema) etc. provide beneficial effects in ADHD.

AYURVEDA & ADHD UNMAD

In *Charaka Samhita*, *Unmada* is described as a condition with a loss of mental clarity, coherence and stability. It is characterised by erratic behaviour, confusion, and a disturbance in cognitive functions.

TYPES^[6]

According to *Acharya Charak*, there are 5 types of *unmad*.

1. *Vataj Unmad*
2. *Pittaj Unmad*
3. *Kaphaj Unmad*
4. *Sannipataj Unmad*
5. *Agantuj Unmad*

Symptoms

- Mental Confusion: Difficulty in understanding and processing information.
- Erratic Behaviour: Unpredictable and sometimes aggressive actions.
- Emotional Instability: Mood swings, irritability, or excessive emotional responses.
- Disorientation: Problems with spatial awareness and coherence in thoughts.

Causes (Hetu)^[7]

Hetu of *Unmad* are multifaceted and involve a combination of physiological, psychological and environmental factors. Understanding these causes helps in diagnosing and treating *Unmad* effectively. Here's an overview of the primary causes (*Hetu*) of *Unmad* according to classical Ayurvedic texts:

- *Dosha* Imbalances
- *Aharaj Hetu*
- *Viharaj Hetu*

Pathogenesis (Samprapti)^[8]

Acharyas have described the following *Samprapti* of the disease:

Flow Chart No. 1

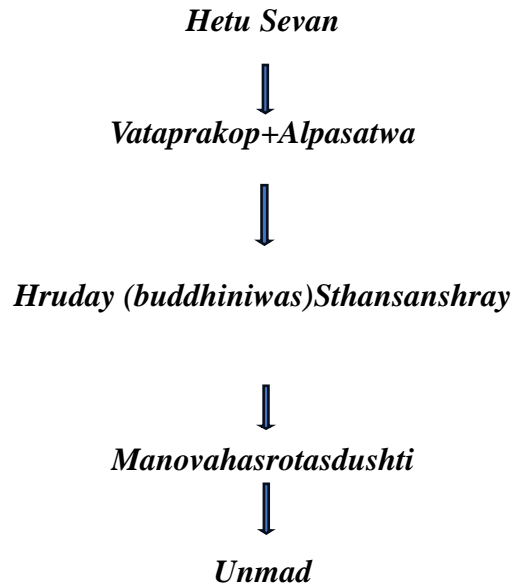


Table 1 : Showing Samprapti-Ghatakas of Unmad:

<i>Samprapti Ghatakas of Unmad</i>	
<i>Doshas</i>	<i>Shareerik –Tridosha, Mansik- rajas,tamas</i>
<i>Dushya</i>	<i>Mana</i>
<i>Agni</i>	<i>Jatharagnimandya</i>
<i>Srotas</i>	<i>Manovahasrotas</i>
<i>Srotodushiti Prakara</i>	<i>Sanga</i>
<i>Udbhavasthana</i>	<i>Hridaya</i>
<i>Adhishthana</i>	<i>Mana, Indriya, Buddhi</i>
<i>Vyadhimarga (Route of Disease)</i>	<i>Madhyam (meadial)</i>

RESULTS : Avoidance of the causative factors of disease is the first line of treatment.^[9] Since ADHD has a strong genetic predisposition and antenatal etiopathogenesis, prophylaxis is very important. In antenatal care, *Pumsavana Samskara*^[10] performed during the early stage of the pregnancy ensures a healthy progeny. In post-natal period, use of various *Prasha* and the *Medhya Rasayanas* should be done to prevent ADHD. *Vata dosha* controls the functions of movement, activity, the process of thought, expression, perception of sense objects, etc. *Chikitsa* which correct vitiated *Vata* and *Pitta dosha* and having effects on the *Manas* are mainly recommended for ADHD.

Shaman chikitsa includes administration of nootropic drugs. *Mandukaparni* - *Centella asiatica* is a well known nootropic drug and a potent *medhya rasayana*. *Ashwagandha*, *Brahmi*, *Shanka pushpi*, *Jatamansi*, *Vacha* have possible action on psycho-neurological deficits. *Brahmi* is extensively used in Ayurveda practice either independently or in combination with other herbs in various mental health conditions. It has been reported to enhance kinase activity, restore synaptic activity, ultimately enhancing neural transmission in the brain thus repairing damaged neurons.^[11] : The methanol and acetone extract of *Vacha* *Acorus calamus* leaves was evaluated for their CNS activity in mice.^[12] *Ashwagandha* is effective in

mental conditions as well as increasing mental focus, improving mental clarity, and supporting the immune system. It's a healing tradition that uses nutrition, exercise, mindfulness practices and herbs to promote balance between the body, mind, spirit and the environment.^[13]

ADHD is associated with reduced levels of dopamine and norepinephrine. By increasing the levels of dopamine and norepinephrine, as well as reducing inflammation in the brain, Ashwagandha is effective in reducing symptoms of inattention and hyperactivity, as well as managing impulse control.^[14] *Jatamansi* have a calming effect, which in turn improves cognitive function, improves memory, enhances mood, and sharpens mental focus.

Panchakarma treatment for ADHD is mainly aimed at improving voice, memory, and intelligence in children. *Bahya Prayogas* like *Murdha Taila* and *Sarvanga abhyanga* has been proven effective in pacifying the *Vata Dosha*. *Brimhana nasya* is effective due to its direct effect on the *Indriyas*. *Brahmi Ghrit*, *Saraswat Ghrit*, *Panchagavya Ghrit* are highly beneficial for memory improvement. It helps to improve digestion, memory, intelligence, smooth functioning of the sense organs, wisdom, immunity, lustre, speech.^[15]

Abhyanga (body oil massage) alleviate *Vata dosha*, relaxes the muscles of the body and soothes the mind. *Ksheerbala Taila*^[16], *Narayana Taila*^[17] and *Chandanadi Taila* are used for *Shiro Abhyanga*. The medicated oils utilized during the process, nourishes the tissue, gives strength and stimulates the Agni.^[18] *Shirodhara* induces a relaxed state of awareness that results in a dynamic psycho-somatic balance. Pouring of *Brahmi Tail*, *Ksheerbala Tail*, *Jyotishmati Tail*, *Godugd*, *Aswagandha Tail* slowly and steadily over the forehead provide

afferent inputs to the cerebral cortex, leading to a tranquilizing effect. The conjoint effect of meditation along with a series of *Shirodhara* procedures is worth exploring further for stress-induced disorders.^[19] It is worthwhile to explore whether neurotransmitters like anandamide may get secreted with such a procedure.^[20]

Shiropichu's local impact, which is based on medication absorption through trans-dermal route, is dependent on the type of medicinal oil used for the therapy.^[21] Medicated oils like *Brahmi Taila*, *Malakangani Taila* used in *Shiropichu* easily penetrates *Manovaha srotas*, changing *Manas Dosha* vitiation (*Raja & Tama*). Additionally, *Taila's* *Bhrimhana*, *Balya*, *Vaata-shamana* and *Medhya* properties correct ADHD. It works on *Tarpak Kapha*, *Sadhak Pitta* and *Prana Vayu*, thereby breaking the pathogenesis of ADHD. Modern medicine states that local treatment, such as an ointment, extends the appropriate organ by passing through the stratum corneum and into the blood vessel. Similar to how the oil on the forehead may extend.

Matra Basti is administered with *Mahanarayana Taila*, *Dhanwantar Taila*. The oil reaches the *Pakvashaya*, the primary location of *Vata Dosha* which is mainly producing hyperactivity in ADHD child. By the *Gunas* of *Basti Dravya*, the vitiated *Vayu* regain its normal state and regulates the mind. It also brings vitiated *Pitta* and *Kapha* to its normal state and the five types of *Vayu* nourish their respective *Sharira-Bhuta Guna*. Via gut brain axis it nurtures the brain and improves cognitive functions in ADHD children. The basis for this interaction is the gut-brain axis, which consists of the brain, immune system, endocrine system, enteric nervous system (ENS), enteroendocrine system (EEC), and the gut bacteria.^[22]

From HPLC study it was found that, phytochemicals of the *Basti* formulation do get absorbed in systemic circulation.^[23]

There is also research showing that gut microbes can activate immune cells in the gut wall, which causes the release of pro inflammatory cytokines and ultimately may affect the permeability of the blood–brain barrier.^[24]

In addition to the internal and external treatment modules, psychotherapy, speech therapy, behavioral therapy, etc. are very important. Many children with ADHD face poor academic performance and similar troubles because of their symptoms. Physical activity can support mood, concentration, and academic performance.^[25] It has been proven that movement can help in reducing ADHD symptoms. Regular breaks allow for exercise and also give a break to the child's mind.

DISCUSSION

The Indian Scenario shows that Attention-Deficit/Hyperactivity Disorder is the developmental disease with the highest incidence. *Ashwagandha* is effective in reducing symptoms of inattention and hyperactivity as well as managing impulse control. *Ayurveda* also explains a systematic treatment protocol for *Unmad* which is based on three principles: 1) *Daivavyapashraya* (spiritual/divine therapy), 2) *Yukti vyapashraya* (therapy based on clinical reasoning) and 3) *Satwavajaya* (psychotherapy). The management of ADHD can be done through prophylactic measures and specific measures. ADHD can be prevented by following healthy measures from the pre-conception period to following *Jata-Karmas* mentioned in the *Paricharya* of *Navajata*. *Sattvavajaya chikitsa* is the major treatment protocol for ADHD. Alternatively, for the management of ADHD symptoms, other measures like

vitamin intake, herbs and lifestyle changes also play a vital role.

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