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Review Article

Role of homoeopathy of AYUSH in attention deficit hyperactivity disorder

Tridibesh Tripathy[1]*, Shankar Das[2], Rakesh Dwivedi[3], C. Nayak[4], D. P. Singh[5], B. Tripathy[6], D. R. Sahu[7], Mohini Gautam[8], Umakant Prusty[9], Madan M. Mishra[10], P. B. Pradhan[11], J. K. Pattnaik[12], S. N. Pandey[13], Sanskriti Tripathy[14], Anjali Tripathy[15], S. C. Tripathy[16]

[1]Department of Social Work, Lucknow University, Lucknow, Uttar Pradesh, India
[2]Tata Institute of Social Sciences, Deonar, Mumbai, Maharashtra, India
[3]Department of Social Work, Lucknow University, Lucknow, Uttar Pradesh, India
[4]Central Council for Research in Homoeopathy, Ministry of AYUSH, Delhi, India
[5]School of Research Methodology, Tata Institute of Social Sciences, Deonar, Mumbai, Maharashtra, India
[6]Indira Gandhi National Tribal University, Amarkantak, Madhya Pradesh, India
[7]Department of Sociology, Lucknow University, Lucknow, Uttar Pradesh, India
[8]Guru Ghasidas University, Bilaspur, Chhattisgarh, India
[9]Central Council for Research in Homoeopathy, Puri, Odisha, India
[10]Homoeopathic Practitioner, Anugul, Odisha, India
[11]AYUSH Mission, Bhubaneswar, Odisha, India
[12]Medical Officer, Government of Odisha, Bhubaneswar, Odisha, India
[13]Government of Uttar Pradesh, Uttar Pradesh, India
[14]Department of Biotechnology, Bennett University, Greater Noida, Uttar Pradesh, India
[15]Jal Jeevan Mission, United Nations Office for Project Services, Jaipur, Rajasthan, India
[16]Coal India Limited, Jharsuguda, Odisha, India

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***Correspondence:**
Dr. Tridibesh Tripathy,
E-mail: tridibeshtripathy@gmail.com

ABSTRACT

The article focuses on the issue of attention deficit hyperactivity disorder (ADHD) that affects the children and adolescents who are the future of the nation. The primary focus of the article is to see the role of homoeopathy of Ayush in dealing with the issue of ADHD. The article begins with the section like introduction followed by the epidemiology of ADHD. Thereafter, it traverses through the clinical features of ADHD. The sections that follow are the diagnosis of ADHD, causes and risk factors of ADHD, manifestations of ADHD. Challenges of ADHD, gender issues related to ADHD, role care givers as support system are also discussed in the article. The article proposes a homoeopathic treatment protocol at the end while focusing on the aspects of essential medicine properties of homoeopathic therapeutics.

Keywords: ADHD, Homoeopathy, Miasm, Materia medica

INTRODUCTION

Attention deficit hyperactivity disorder (ADHD) is a complex neuro developmental disorder that affects children and adolescents. Previously, just like acute respiratory infections (ARI), it was perceived as a childhood condition that was expected to fade with age. Recent studies have not accepted this notion. It is now seen that a significant number of individuals with ADHD continue to experience symptoms into adulthood.[1-6]

ADHD is a developmental neurological disorder that has three basic characteristics. These are attention deficit, hyperactivity and impulsivity.[2]

EPIDEMIOLOGY

ADHD affects around 5% of children and adolescents globally. Symptomatic adult ADHD cases are around 6.76% of the population. Worldwide, ADHD is the third most common mental health disorder after depression and anxiety affecting an estimated 3.4% of children and youth. Studies have also shown that ADHD prevalence in the pediatric population has been stable over the past three decades. Current estimates show that 50% of children with ADHD continue to have symptoms of ADHD in adolescence and adulthood.[3-6]

The prevalence of ADHD in children and adolescents according to the diagnostic and statistical manual of mental disorders (DSM-V) criterion is also higher than previous diagnostic criteria as per studies. One study's analysis includes 61 cross sectional research with 53 researches used to determine the prevalence of ADHD in children. In the study, 7.6% of 96.907 children aged 3 to 12 years had ADHD (95% CI:6.1-9.4%) & 5.6% of teenager aged 12 to 18 years had ADHD (95% CI:4.8-7%).[2]

CLINICAL FEATURES

Children with ADHD experience intermittent difficulties with attention and behavior. These habits persist over time and may exacerbate. Thereafter, ADHD affects various aspects of a child's life that includes academic performance, home dynamics and social interactions.[1-6]

Extreme daydreaming, forgetfulness or frequent loss of items, uncontrollable or repetitive body movements, excessive loquaciousness, habitual careless mistakes, engagement in risky behavior, difficulty in resisting temptation, challenges in socializing with peers, occasional aggressive behavior. ADHD may co-occur with other psychiatric conditions such as obsessive compulsive disorder (OCD), anxiety and depression.[1-6] The following table gives the developmental stages and symptoms exhibited during these stages.

Table 1: Developmental stages and symptoms.[7-9]

Developmental stage	Symptoms
Preschool	Excessive motor activity or mobility, low frustration tolerance, impulsivity, inability to sustain attention, distractibility, poorly organized behavior, aggressiveness, noncompliance, in appropriate or demanding behaviors, negative social behavior, and less adaptive behaviors
School-aged	Symptoms similar to those in preschool-aged children, with the emergence of academic difficulties, rejection by peers, oppositional behavior, lying, stealing, poor self-esteem, and poor sleep patterns
Adolescence	Inattention, impulsiveness, inner restlessness, continued academic difficulties, problems with authority, increased risky behaviour (e.g. smoking, substance abuse, early sexual activity, and driving accidents/traffic violations), excessively aggressive and anti-social behavior, and overall feelings of worthlessness
Adulthood	Exacerbation of underlying psychiatric conditions, frequent job changes and job losses, marital discord, multiple marriages, problems with the law, and substance abuse

CAUSES AND RISK FACTORS

ADHD is believed to have resulted from a combination of genetic, environmental and neurological factors. Studies indicate abnormalities in brain structure and function, prenatal exposures, genetic predisposition play significant roles in the progress of ADHD. Further, prenatal exposure to toxins, premature birth, low birth weight, maternal smoking during pregnancy elevates ADHD risk.[1-6]

Genetic predispositions with heritability estimates ranging from 70% to 90%, specific genes involved in dopamine regulation, neuro-transmitter signaling, neuronal development are all linked to ADHD.[1-6]

ADHD is associated with decreased activity in brain regions that regulate attention and activity levels. This factor explains the role of brain anatomy and function as an etiology. The condition usually runs in families where there is one in four chance that a child with ADHD has an affected parent. In addition, siblings and close relatives also have an increased likelihood of experiencing ADHD symptoms. Studies have also identified key mutations in dopaminergic and serotonergic pathways. This suggests the genetic contribution towards ADHD. Further, significant head injuries and premature birth elevates the risk of developing ADHD.[1-6]

Prenatal exposure to substances like alcohol or nicotine from smoking accelerates the chance of ADHD, rare environmental toxins like lead disrupts neuro-developmental processes which then leads to ADHD.[1-6]

DIAGNOSIS

The diagnosis of ADHD is complex. None of the ADHD symptoms are abnormal on their own. Usually most of the people occasionally disoriented, unfocussed or restless.

Not all cases of persistent hyperactivity or distractibility are indicative of ADHD.[1-6]

Diagnosis requires a comprehensive evaluation by a qualified health care professional using various techniques such as symptom checklists, historical information including physical examinations.[1-6]

The American Psychiatric Association's DSM-5 in its 5th edition gives guidelines for diagnosis. As per DSM-5, ADHD has three main presentations. These are given in the Table 2.

Table 2: Presentations of ADHD (source-DSM-5).[1-6]

Presentation of ADHD	Symptoms of the presentation
Combined	Both inattention and hyperactivity, impulsivity in the last 6 months
Predominantly inattentive	Signs of inattention and no hyperactivity and impulsivity in the last 6 months
Predominantly hyperactive and impulsive	Signs of hyperactivity and impulsivity and no inattention in the last 6 months

BEHAVIORAL SYMPTOMS

The criteria for establishing an ADHD diagnosis are as follows: either six or more of the following symptoms of inattention have persisted for at least six months to a degree that is maladaptive and inconsistent with developmental level; or six or more of the following symptoms of hyperactivity-impulsivity have persisted for at least six months to a degree that is maladaptive and inconsistent with developmental level.[10]

The behavioral symptoms that are exhibited in each of the areas of ADHD is explained below.

Attention deficit

The behavioral symptoms for attention deficit include: often fails to give close attention to details or makes careless mistakes in schoolwork, work or other activities; often has difficulty sustaining attention in tasks or play activities; often does not seem to listen when spoken to directly; often does not follow through on instructions and fails to finish school work, chores or duties in the workplace (not due to oppositional behavior or failure to understand instructions); often has difficulty in organizing tasks and activities; often avoids, dislikes or is reluctant to engage in tasks that require sustained mental effort (such as schoolwork or homework); often loses things necessary for tasks or activities (e.g. toys, school assignments, pencils, books or tools); is often easily distracted by extraneous stimuli; and is often forgetful in daily activities.[10]

Hyperactivity

The behavioral symptoms for hyperactivity include: often fidgets with hands or feet or squirms in seat; often leaves seat in class room or in other situations in which remaining seated is expected; often runs about or climbs excessively in situations in which it is inappropriate (in adolescents or adults, may be limited to subjective feelings of restlessness); often has difficulty playing or engaging in leisure activities quietly; is often "on the go" or often acts as if "driven by a motor"; and often talks excessively.[10]

Impulsivity

The behavioral symptoms for impulsivity include: often blurts out answers before questions have been completed; often has difficulty awaiting his/her turn/opportunity; and often interrupts or intrudes on others (e.g. interrupts conversations or games).[10]

CHALLENGES

The concepts of ADHD have become broader and more heterogeneous. The diagnosis and treatment of ADHD are still challenging for clinicians, thus needing increased reliance on their expertise and experience. There should be a discussion of multimodal, pharmacological and non-pharmacological interventions including their evidence base.[11]

Gender issues

Girls are different than boys in dealing with ADHD. They are subtle, do not speak, do not express themselves and their symptoms are written off as hysterical in nature.[12]

Many girls aren't diagnosed is that they knock themselves out to compensate for their weaknesses and hide their embarrassment about falling behind, losing things, feeling clueless. The growing awareness, as they get older, that they have to work much harder than their peers without ADHD to accomplish the same thing is very damaging to their self-esteem. Girls who are chronically hard on themselves about their lapses may be struggling.[12]

TREATMENT AND SUPPORT

Treatment of ADHD involves a combination of psychotherapy and medication. Stimulants like 'methylphenidate' and non-stimulants like 'atomoxetine' are usually prescribed in allopathy to alleviate ADHD symptoms.[1,13]

Adopting a holistic approach that combines evidence based treatments, supportive environments, increased awareness is the need of the hour. Here, homoeopathy fits into the bill. Simultaneously, increased awareness about ADHD can help ADHD affected individuals to lead fulfilling lives thus making positive contributions to the society.[1,13]

Role of care givers

The support system through care givers need to create daily schedule and help the child to plan activities. They should also manage distractions and triggers. They should limit the choices in communication and rather be specific in their communication with the child. The caregiver should discipline the child effectively without yelling or spanking. The parents and caregivers should create positive opportunities and apply methods like praise or reward. The child should be provided healthy lifestyle behaviors like eating nutritious food, exercise daily, have optimal sleep. They should also have a role in promoting education, awareness, acceptance and inclusion in the society.[1,12,13]

CURRENT SITUATION IN INDIA

In India, ADHD is increasingly recognized as a significant neuro-developmental disorder affecting individuals across all age groups. ADHD affects approximately 5-7% of school aged children. Prevalence among children and adolescents ranges from 1.30% to 18.9% in India. The summarized prevalence of ADHD is 9.40%. In primary school children, the prevalence was 11.32%.[14-16]

Way ahead

Family members should remain vigilant in observing any changes in a child's behavior and promptly seek medical advice. The 2002 national policy on Indian systems and homoeopathy envisages the role of homoeopathy in National Health Programs and one such program is the NMHP. The objectives and strategies mention about linking of the homoeopathic therapeutic system both at institutional and community level.[1-6,19]

As 10% of the population in India use Homoeopathy, using the projected population of 150 crores in the absence of a census since 2011, it can be inferred that 15 crore population can be saved from the development of ADHD in their lives. Simultaneously, the ADHD patients will benefit as recurrence of other mental disorders will be reduced while saving them from side effects of chemotherapy during the course of treatment.[17,18]

The concept of Ayurveda and the three diets should be adopted by these children where the Satwik diet should be eaten more, Rajasik foods to be taken in moderation and Tamasik should be consumed sparingly.[20]

Homoeopathic angle

The system of homoeopathic therapeutics is the most useful in ADHD as during drug proving (human clinical trial) both the mental and physical aspects of the individual/prover are elicited. There are 'Miasms' which are disease causing dynamic and infectious influences that are behind ADHD. The dominant 'Miasm' here is 'Psora' and the recessive 'Miasm' here is 'Syphilitic'. Psora causes functional disorders as primarily the symptoms are disorders in the functional behaviors.[21-30]

As mentioned above, studies indicate that abnormalities in brain structure and function, prenatal exposures, genetic predisposition play significant roles in the progress of ADHD. As these are destructive processes in the body, the secondary 'Miasm' is syphilis. Hence, the miasmatic analysis is 'psorico-syphitic'.[21-30]

As ADHD is behavioral, the following section details out the drugs as per the behaviors. It is to be noted that as homoeopathy follows the principle of individualization, there are many remedies as per the symptomatic issues. The homoeopath has to choose medicine/s as per the 'totality of each of the case'.[21-30]

Attention deficit disorder

The drugs are 'Anacardium', 'Androctonos', 'Arsenic Album', 'Aspartame', 'Calcarea Phos', 'Carcinosin', 'Cina', 'Medorrhinum', 'Nux Vomica', 'Ritalin', 'Stramonium', 'Tarentula'.[21-30]

Hyperactive children

The drugs are 'Arsenic Album', 'Carcinosin', 'Chamomilla', 'Cina', 'Hyoscyamus', 'Iodium', 'Medorrhinum', 'Stramonium', 'Tarentula', 'Tuberculinum', 'Veratrum'.[21-30]

Hurried behavior

The drugs are 'Sul Acid', 'Arg Nit', 'Arsenic Album', 'Belladonna', 'Carcinosin', 'Dulcamara', 'Hepar Sulph', 'Ignatia', 'Lilium T', 'Medorrhinum', 'Merc Sol', 'Natrum Mur', 'Nux Vomica', 'Silicea', 'Sulphur', 'Acid Sulph', 'Tarentula'.[21-30]

Restlessness

The drugs are 'Aconite', 'Anacardium', 'Androctonum', 'Arg Nit', 'Arsenic Album', 'Arsenic Iod', 'Baptisia', 'Belladonna', 'Calcarea Carb', 'Calcarea Phos', 'Camphor', 'Carcinosin', 'Cimicifuga', 'Citrus Vul', 'Coloccynth', 'Cuprum Met', 'Cuprum Ars', 'Ferrum Met', 'Ferrum Ars', 'Helleborus', 'Hyoscyamus', 'Lycopodium', 'Medorrhinum', 'Merc Sol', 'Dulcamara', 'Pyrogen', 'Rhus Tox', 'Sepia', 'Silicea', 'Staphisagria', 'Stramonium', 'Sulphur', 'Tarentula'.[21-30]

Learning disability

The drugs are Agaricus, Aethusa, 'Baryta Carb', 'Calc Carb', 'Lycopodium', 'Merc Sol'.[21-30]

Understanding difficult

The drugs are 'Aethusa', Baryta Carb', 'Carcinosin'.[21-30]

Loquacity (talkativeness)

The drugs are 'Amphetamine', 'Hyoscyamus', 'Lachesis', 'Stramonium'.[21-30]

From the list of bach flower remedy, 'Vervain' can be prescribed as it addresses hyperanxiety.[21-30]

From the list of bowel nosodes, 'dysentery compound' addresses anticipatory nervous tension.[21-30]

Here, it should be noted that the essential medicine properties of homoeopathy as mentioned in the documents of GOI will come handy in the integration of homoeopathy in NMHP to deal with ADHD. Dealing with inflammation markers in the body through homoeopathy has already been established with the use of COVID 19 through homoeopathy therapeutics. The effect of bowel nosodes in neuro-psychiatric disorders like ADHD has already been reckoned with.[31-35]

All these can be done if the universal health coverage is addressed through integration of AYUSH. The current article proposes the integration of homoeopathy of AYUSH in to the mainstream.[31-35]

CONCLUSION

The ADHD issue primarily affects the future of the nation. To optimize the benefits of the New Education Policy, these type of mental issues like ADHD can be dealt only if all the stake holders work cohesively.

As homoeopathy addresses both physical and mental aspects while being cost effective, therapeutically effective without having side effects, masses can be covered through the identification mechanism of the Rashtriya Bal Swasthya Karyakram (National Child Health Program) at schools.

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