

An Ayurvedic Review & Management of Autism in Children

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Abstract

Autism spectrum disorder (ASD) is a neurodevelopmental condition which can be diagnosed during childhood period. It is characterised by poor social communication, restricted interests and repetitive behaviour. The main defect in the children with autism is their inability to realize the fact that the other people surrounding them are different from them in their desires and thought process. Prevalence estimates for autism spectrum disorder (ASD) have been increasing over the past few decades. It is one of the most challenging disorders for children and their families and this condition typically persists throughout one's life period. On viewing from *Ayurvedic* aspect, it is not mentioned directly in *Ayurveda* but it can be correlated with *Unmaad Roga* as most of the clinical features of different varieties of autism spectrum disorder resemble the features of *Unmaad Roga*. It can be managed by many *Ayurvedic* formulation and *Panchkarma* therapy which is very effective in autism spectrum disorder.

Keypoints: Autism, Unmaad Roga, Manovaha Srotas, Ayurvedic management.

Introduction- Autism is a complex neurodevelopmental disorder characterized by delay or abnormal functioning in the areas of social interaction, communication & imagination and by restricted and repetitive behaviour. According to the DSM-5, the term ASD, is the new semantic for the earlier nomenclature, **pervasive developmental disorder**.¹ Autism can be diagnosed at any age, it is described as a “developmental disorder” due to it's appear within first 2- 3 years of age. The Greek word "autós" meant self and the word “autism” was used by Bleuler which means morbid self-admiration and withdrawal within self.² Latest global survey according to a 2021 study published in the Indian Journal of Pediatrics, suggests that 1 per 68 children are being diagnosed with ASD Autism is reported to be three times more common in boys than girls.³ It is the world's third most common developmental disorder, so to spread awareness every year 2nd April is marked as Worlds Autism Day. Genetic and environmental factors that affect the developing brain influence it. Even though there is not a single, overarching etiology for ASD yet but genetic predisposition has 50-100 times increase rate of autism in siblings and neurologic theory in the form of damage to reticular formation of brainstem at about 5th week of intrauterine life

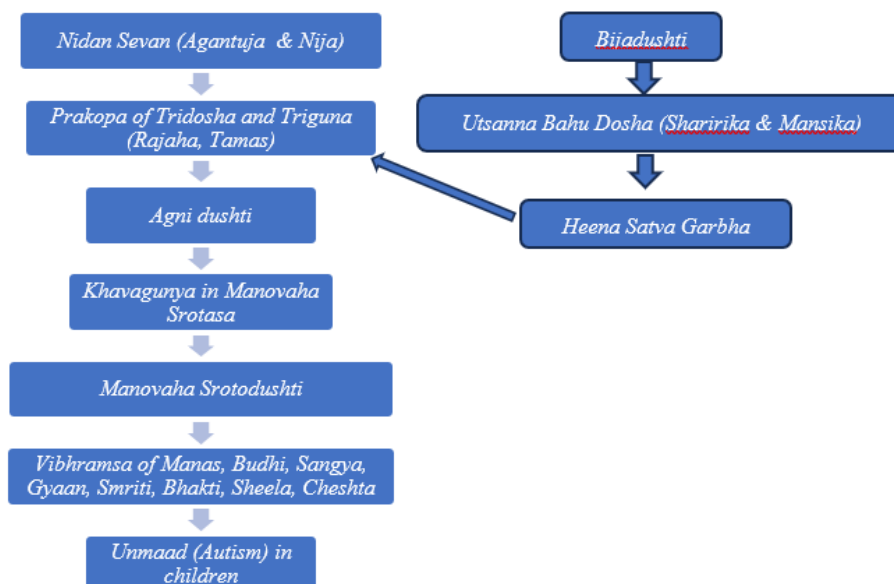
(Rubella) which leads to autism¹ and it's continuing research is expanding our knowledge of various etiological processes that could be involved in this condition.⁴ Advances in technology have ensured its inevitable integration in our life. Some working parents in busy schedule give their focus and full attention towards their job and cell phones can also affect the development of focus in infants and can contribute to the development of autistic features. The features of autism are much similar to that of *Unmaad Roga*, a disease condition mentioned in *Ayurvedic* classics. In *Ayurveda*, *Charaka* has described, *Hridya* is *Ashrya* (place) of *Chetna*⁵ (Consciousness) it can be understood by the concept of *Manas & Budhi* and its connection with *Atma* (according to *Sushruta* at the time of fetal development *Manas* is developed at the 5th months and *Buddhi* is developed at 6th months⁶).

Gyaanotpatti Krama-*Manas* & its attributes in its normalcy are essential for acquisition of knowledge through sensory perception, experience or learning. *Manas* perceives the object or undergoes the experiences. *Buddhi* determines the specific properties of input and drives the child to speak or act accordingly. The three components of *Buddhi-Dhee*, *Dhriti* & *Smriti* are crucial factors for the genesis of knowledge⁷.

Moreover, *Tridoshas* have an effect on the level of *Manas* and *Buddhi*. *Trigunas* of *Manas-Satva*, *Raja* & *Tamas* determines the mental state of the child. Thus, autism can be attributed to the dysfunction of *Manas*, *Buddhi*.²

Pathophysiology-^{8,9}

ASD can be categorized under *Unmaad* and can be related to *Kaphaja-Vataj Unmaad* as most of the signs are almost similar to *Kapha* and *Vata* type. Due to various etiological factors (*Agantuja*, *Nija*, *Bijadushti* & others), the conjugation between *Atma* and *Manas* is disrupted, *Manovaha Srotodushti* and *Tridoshadushti* are the basic cause of childhood autism. *Tridosha Prakopa* and effected *Rajaha* & *Tamas Guna* easily in *Heena Satva Garbha* leads to *Agni Dushti*. *Manovaha Srotodushti* is caused by *Khavaigunya* (Space or part of body devoid of normalcy) in *Manovaha Srotasa*, leads to *Vibhramsa* (Derangement) of *Manas* (Mind), *Buddhi* (Intelligence), *Smriti* (Recoiling power), *Bhakti* (Devotion), *Gyaan* (Knowledge), *Sangya* (Consciousness), *Sheela* (Character), *Cheshta* (Physical or mental efforts). Thus, autism can be attributed to the dysfunction of *Manas*, *Buddhi* and its connection with *Atma* (Soul) and *Indriya* (Sense organs) due to impairments of *Tridoshas* and *Trigunas*.



Etiology- The etiology of *Unmaad* (Autism) mentioned in *Brihatrayi* mainly for adults. *Unmaad* developed through *Beeja Dushti* (Genetic alteration, mutation), *Virudha Aahara* (Non congenial dietetics), *Aaharadosha* (consume of highly *Vata* vitiating diet after conception), *Manas-Abhighata* (Injury to cerebrum during delivery), addiction of electronic gadgets such as phone, mobile games can be high risk for autism, *Vaikarik Bhava* such as *Bhaya* (Fear), *Kopa* (Aggravation), *Shoka* (Grief) and *Harsha* (Excitement), unfulfilled desires in *Garbhini* may hurt the mind in fetus¹⁰.

Communication between Unmad and Autism-

Sr. No.	<i>Unmad Lakshana</i> ^{11,12}	Clinical features of Autism ¹³
1	<i>Parisaraṇam Ajasra</i>	Constant wandering (Hyperactive)
2	<i>Paryakula drishti</i>	Lack of eye contact
3	<i>Akasmāt akṣhi bhru oṣṭā amsa hanu agrahasta pada anga vikshepana</i>	Sudden spasm of eyes, eyebrows, lips, jaws, and irregular movements of shoulder, fore-arms and legs (child have grandmal seizures at some time)
4	<i>Bhuddhi smṛiti ch upahatya</i>	Impairing intellect and memory and thereby deranging their mind produces insanity (some degree of intellectual disability).
5	<i>Vakcheshtitam</i>	Speech is either poorly developed or not developed
6	<i>Anannābhilāṣa arochaka vipaka</i>	Disinclination towards food associated with anorexia and indigestion.
7	<i>Satatam aniyatanam ch giram utsargah</i>	Continuous, irrelevant and incoherent speech (Repeats words or phrases over and over (i.e., echolalia))
8	<i>Abhikshna Smita hasita nrutya gita vaditra samprayogasca asthane</i>	Some children exhibit sudden changes in mood with bursts of laughing, crying and dancing without obvious reasons.
9	<i>Vina vansa sankhasamyatala sabdanukaraṇam</i>	Loudly imitating the sounds of lute, flute, conch (Has unusual reactions to the way things sound)
10	<i>Amarsha, Krodha, Asthane Samrambha</i>	Intolerance, anger and excitement at inappropriate occasions
11	<i>Ekadeśe sthanam</i>	The child is extremely aloof, & seemingly living in an isolated world

		of his own (Impaired social interaction)
12	<i>Alpaśah Camkramaṇam</i>	Delayed movement skills
13	<i>Rahasyakamta</i>	Prefers loneliness (Shows little interest in peers)
14	<i>Swapna nityata</i>	Always drowsy (sleeping habits)

How to Diagnosed autistic child?¹⁴

Diagnostic and Statistical Manual of Mental Disorders,^{5th} Edition (DSM-V) is the new criteria follows for autism spectrum disorder (ASD)-

- Deficits in social communication and social interaction.
- Restricted, repetitive patterns of behaviour, interests or activities.
- Symptoms must be present in the early developmental period.
- Symptoms cause clinically significant impairment in social, occupational and functioning.

Management of Autism-

Acharya Charaka has described three types of *Aushadha* (Treatment) in his *Samhita* i.e. *Daivavyapashrya*, *Yuktivyapashrya* and last is *Satvavajaya*.¹⁵

A. Daiva Vyapashrya Chikitsa-*Daivavyapashrya Chikitsa* is one of the Mystical therapies. These *Chikitsa* principles are being carried out in different parts of the world as a part of religious belief.

B. Yukti Vyapashrya Chikitsa-

Here the treatment is based on reasoning and necessary planning and hence is scientific or rational. The rational Ayurvedic management is carried out in four parts they are-

1. *Nidana Parivarjana* (Avoidance of causative factors)
2. *Samsamana* (*Dosha* pacifying therapy)
3. *Samshodhana* (Bio-cleansing therapy)
4. *Pathya Aharavihara* (Favourable diet and regimens)

C. Satvavajaya- It includes all methods of *Manonigraha*, *Sadvrita* and modalities of *Manodosha Chikitsa*.¹⁵ The applied aspects of *Satvavajaya Chikitsa* can be summarized as: assurance, refinement of emotions, cognitive behavioural therapies, reframing of ideas, correction of objectives and ideas, methods to improve concentration and mental temperament such as music intervention.²

1. ***Nidana Parivarjana***-To prevent and management of the disease, it is necessary to follow the first line of treatment in *Ayurveda* that is *Nidana Parivarjana*. It means to eliminate or avoid the causative factors which help in development of disease¹⁶.
2. ***Sansamana Chikitsa***- This involves use of combination of Herbal drugs. *Medhya Rasayana* or Brain Tonics are specifically grouped into 4 nootropic herbs, namely *Mandukaparni* (*Centella asiatica*), *Yastimadhu* (*Glycyrrhiza glabra*), *Guduchi* (*Tinospora cordifolia*), and *Shankhapushpi* (*Convolvulus pleuricaulis*). When used together, they have a pacifying effect on all 3 *Doshas* (*Vata*, *Pitta* & *Kapha*). Brain tonics reduce anxiety and stress, increase immunity, and mental ability. They prove useful in addressing the physical and mental ailments in autistic patients¹⁷.

3. **Sanshodhana Chikitsa** - This includes *Panchkarma* procedures by which detoxification of the body is done. *Panchkarma* procedure include *Vamana* (Therapeutic vomiting), *Virechna* (Therapeutic purgation), *Nasya* (Instillation of medicine through nostrils), *Vasti* (Medicated enema) and *Raktamokshana* (Eliminating vitiated blood)¹⁸. But avoid the *Vamana*, *Virechna* and *Raktamokshana* in younger children. *Panchkarma* procedure *Matra Vasti* and *Nasya* are widely used to treat ASD. *Sarvanga Abhyanga*, *Shali Shashtik Pinda Sweda* are *Purva Karma* which are apply before the *Pradhana Karma* (*Panchkarma*). *Shali Shashtik Pinda Sweda* can be done in the form of *Pradhana Karma* in the autistic child. Other procedures such as *Shirovasti*, *Shiropichu*, *Shirodhara* are also beneficial for autism.
- **Sarvanga-abhyanga**- *Sarvanga Abhyanga* with *Ksheer Bala Tail* is a synchronized massaging of the whole body towards the direction of the movement of arterial blood and bodily hairs. *Abhyanga* with a circular movement will stimulate lymph nodes, increases the lymph flow and blood circulation. *Abhyanga* pacifies the *Doshas*, reduces fatigue, build stamina and give nourishment to the body¹⁹.
 - **Shali Shashtik Pinda Sweda**- This procedure is done after *Abhyanga* therapy, the cooked rice *Shashtik Shali* (special red-brown rice) is used in *Potali Swedana*. *Potali* is dipped in lukewarm cow milk. This *Potali* is rubbed and squeezed middy on the patient. This is done in 7 postures (2-5 min in each posture). After the procedure is completed, the *Shashtika* is scrapped from the body and advised bath with lukewarm water. *Shashtika Shali Pinda Sweda* is help to improve circulation, nourishment to the body. It also improves the strength of the tissue of the body²⁰.
 - **Nasya**- According to *Charaka* and *Vagbhatt*, *Ghran* is the gate way of *Mastishka*.
Nastha karma cha kurvita Shiropageshu ShashtravitaA
Dwara hi Shirso Nasa tain tad vyapya hanti taan AA Ch. S.9/88
Nose is the opening to reach the brain, any medicine injected in nasal cavity acts directly on brain²¹. *Nasya* refers to an *Ayurvedic* therapy that includes herbal oils, powders through nasal route. It enhances the activity of sense organs and act as preventive therapy against disease of head region. It can be useful in headache, mental disorders, neurological disorders and help to relieve stress and emotional imbalance. It is useful in *Vakgrah()*, *Gadgad* (repeated) and *Kranthana()*²².
 - **Vasti-Vasti** is the most effective treatment of *Vata Dosha*. *Vasti* expelles the bodily toxins and vitiated *Doshas* by introducing medicated *Kwatha* or *Taila* through anus. *Vasti* is best for gut cleansing when the child with autism has mood swings and disturbed stomach. It improves memory function, allowing patients to remember information they have previously heard. The voice becomes better and gets softer²³.
 - **Matra Vasti** is the best in all types of *Vastis* which is highly praised because it can be administered at any time and its *Upadrava* are very low. *Matra Vasti* is a type of *Anuvasana Vasti*. *Matra Vasti* pacifies specially *Vata Dosha* and does *Brihangna* of the body²⁴.
 - **Shiropichu**- It is a therapeutic procedure where medicated oil is applied to the scalp using a cotton pad. It improves in cognitive function, reducing hyperactivity and enhancing overall well-being²⁵.
 - **Shirodhara**- *Shirodhara* involves a continuous stream of *Sukhoshna Taila* poured over the fore head in a rhythmic manner. This therapy helps in reducing anxiety and enhancing sensory integration²⁵.

Aushadha Yoga²⁶

- **Kalyanaka Ghrita**- This *Ghrta* is best for *Manas Dorbalya* (Brain function disorders) and *Gadgad Vaani* (Repeated speech). It enhances the *Aayu & Bala* and reduce the potency of *Grha Badha*.

- **Mhakalyanaka Ghrita-** *Tridoshaja Unmad* is pacified when intake of this *Ghrita*. It is pacifying the *Manas Roga* (ASD) and act as a *Brihana* in children.
 - **Mhapaishachika Ghrita-** Ingredients of *Mhapaishachika Ghrita* are *Jatamansi* (*Nordostachys jatamansi*), *Shankhapushpi* (*Convolvulus prostrates*), *Brahmi* (*Bacopa monnieri*), *Shatavari* (*Asparagus racemosus*), *Vacha* (*Acorus calamus*) etc. Its benefits similar to *Amritam*. It enhances *Buddhi* (intelligence), *Smarana Shakti* (Recoiling power) and promote to growth & development.
 - **Lahshunadhya Ghrita-** It should be used in the form of *Nasya*, *Abhyanga* and oral intake.
4. **Pathya Aahar-vihara** -*Ayurveda* believes that in addition to the food and activities of *Garbhini*, her mental status plays an important role for the development of physical and mental health and disease in the child. *Ayurveda* emphasizes the importance role of healthy *Aahara-Vihara* and lifestyle changes to promote health and wellbeing. Dietary changes should be done such as the elimination of certain foods i.e. processed foods, chips, Kurkure, fast food and artificial sweeteners which can exacerbate symptoms.

General care- We should encourage the attendant of the child for healthy diet, *Yoga & Asana* and should be warned regarding excessive use of mobile. Speech therapy is also helpful. Parents should give full attention to his/her child.

Conclusion- Autism is a complex neurodevelopmental disorder characterized by delay or abnormal functioning in the areas of social interaction, communication & imagination. Autism can be correlated with *Unmaad* (*Vata-Kapha Pradhan*) due to similarity in symptoms. Autism caused by Bija Dosha and activated through a favorable environment. *Medhya Rasayanam*, *Agni Deepan*, *Panchkarma* therapy are very effective in autism as these managements pacifies all 3 *Doshas* (*Vata, Pitta & Kapha*), reduces anxiety and stress, increase immunity, and mental ability. They prove useful in addressing the physical and mental ailments in autistic patients. Thus, these managements improve blood circulation to the brain and increase the mental power and wellbeing of the autistic child.

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