

Review Article - Ayurveda

Prevention & Management of Autism - An
Ayurvedic PerspectiveBrahm Dutt Sharma*, Khushal Chouhan¹*Asst. Professor, Department of Kaumarbhritya, ¹Final Year B.A.M.S, Shri Shiridi Sai Baba Ayurveda College and hospital, Renwal, Jaipur, Rajasthan, India

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Abstract

Background: Autism is a complex development disability appearing in infancy or early childhood which has been increased in its prevalence and incidence since the last two decades. Western medicine and research has seemingly stalled in respect to the management of autism however early intervention and behavioral therapies have shown improvement to some extent. **Aims:** To critically analyse the Ayurvedic pathophysiology of Autism and the approach in its prevention and management. **Materials & Methods:** Classical texts books of Ayurveda, journal publications, various internet and clinical experiences were considered as the source of information. **Results:** Ayurveda understands the nature of human brain in a completely different manner from modern day's psychiatric and physiological theories. Autism has close similarity to the features that of *Unmada* (insanity) described in Ayurveda. The condition may be due to the result of *Khavaigunya* (disarrangements) of *Srotas* (channels) which nurtures *Manas* (mind) as a consequences of many *Agantuja* (epigenetic toxic insults & post natal environmental factor) and *Sahaja* (genetic) factors. Among the various type of treatment modalities *Yuktivyapashraya Chikitsa* (Rational therapy) plays a vital role in managing the symptoms of Autism in children. However the preventive measures are more appreciated than the treatment protocols. **Conclusion:** Ayurveda indicates that the prevention of psychological disorder starts since birth and continues till prenatal period. *Yuktivyapashraya Chikitsa* which encompasses of herbal supplementation, *Yoga*, *Panchakarma* and usage of specific and controlled diet can help in preventing and resolving the condition.

Keywords: Autism, Ayurveda, Management, Prevention, *Yuktivyapashraya Chikitsa*

Introduction

Autism is not a disease, it is a well-defined neuro-behavioural and neuro-developmental disorder which results in a broad range of behaviours and often lifelong impairments. It is characterized by a triad of qualitative impairment in verbal and non-verbal communication, imaginative play and reciprocal social interaction. Other features seen in autistic children are obsessive behaviour, reduced muscle tone, compromised digestive system etc.^[1] It is the world's third most common developmental disorder, so to spread awareness every year 2nd April is marked as Worlds Autism Day.^[2] For years India did not find the number of extent of autism, doctors routinely called it a Western syndrome, doubting its prevalence in India. It is one of the most mis-diagnosed disorders,^[3] in India its prevalence rate is 1 in 250 (Figure may vary) and currently 10 million people are affected.^[4] The nearest similarity of autism with Ayurvedic diagnosis is *Unmada* (Insanity). The *Lakshanas* (features) described in *Unmada* with are a

mixture of features of *Vata*, *Pitta* & *Kapha* singularly or collectively (Table 1) are even seen in Autism. The present review is an effort to interpret and analyse the concept of Ayurvedic pathophysiology and its perspective in the prevention and management of Autism.

Materials & Methods

Information regarding the conditions which is similar to Autism were referred from the classical Ayurveda texts, journals and various internet resources and were critically analyzed along with the clinical experiences in managing Autism.

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Table no 1. Clinical features of autism & their relation with Dosh

S.N	Social Features	Dosha
1	Problem in verbal and non-verbal communication	Vata ^[5]
2	Inability to engage socially or emotionally with caregivers	Vata ^[6]
3	Preference for solitary play	Vata ^[6]
4	Poor eye contact	Vata
Language Features		
5	Delay of speech and language	Vata ^[5]
6	Impairment in comprehension and language	Vata ^[5]
7	Fluent but unintelligible jargon	Vata ^[5]
Activities		
8	Behaving like deaf	Vata ^[5]
9	Irritable	Vata ^[5]
10	Chronically unhappy	Vata ^[5]
11	In some cases hyperactivity and impulsivity	Vata ^[5]
12	Stereotypical body movements (Twirling, flapping of hands, toe walking)	Vata ^[6]
Mental Features		
13	Neurological dysfunction like seizures	Vata ^[5]
14	Few children showing amazing remarkable talent	Vata Kapha ^[6]
15	Mental retardation in 50-70% cases	Vata ^[7]
16	Sleep disturbance (mostly in first year)	Vata ^[8]

Observations

Understanding the patho-physiology of Autism

The exact cause of autism is still not definitely known, genetics factors (*Beeja Dosh*) and pre and post natal insult to brain seems to be important. The other possible suspected cause include diet (*Ahara Dosh*), digestive tract changes, poisoning (*Dushi Visha*), inability of body to properly use vitamins and minerals, vaccine sensitivity etc.^[9] *Srotas* are the channels which are responsible for *Dosha Gaman* (movement of bodily humors), *Dhatu Pusti* (nourishment of all body tissue) and *Mana Sudhi* (purity in psychological feelings). *Dushti* (impairment) in these channels cause derangements and are responsible for various physiological and neurological disabilities.^[10] Possible cause of autism may be *Khavaigunya* (divergence in channels) as a consequences of many *Agantuja* (epigenetic toxic insults & post natal environmental factor) and *Sahaja* (genetic) factors. Further vitiated *Doshas* (physical and mental humors) may exacerbate the *Khavaigunya* leading to various core features of autism.^[11] *Prajnaparadha* (actions against one's self-conscious) at various stages of pregnancy by the pregnant mother is an other cause which may lead into *Manovikara* (dysfunction of mind) in the neonate which results in appearance of the signs of autistic spectrum disorders at later period.^[12] *Vata Dosh* is a prime factor responsible for the neurological as well physiological functions of the body, all the above observed causes leads to *Dushti* of *Vata* which is the most important reason in developing the features of autism as described in table no. 1.

Prevention of autism

Regarding the psychological disorders of a child, *Acharya* have indicated to prevent these types of disorders not only since birth but also before birth and various measures have been prescribed to them in this regard.

Before conception- *Acharya Charak* has prohibited consanguineous marriage, citing it an one of the prime causes for developing genetic and congenital disorders^[13], even modern sexologists and biologists have described the same. Before going for conception, an extensive and exhaustive list of restrictions and rules for a woman during *Ritukala* and pregnancy which may affect the child's psychology have been mentioned,^[14] following of these has a definitive role in prevention of the condition.

During pregnancy & delivery- *Acharya Charaka* has advised to avoid various dietetic regimens, habits and trauma in context of *Garbhopaghatakara Bhavas* (detrimental factors affecting foetus) which can lead to various psychological disorders like *Mudha* (dull), *Nidralu* (inactive/sleepy), *Unmadi* etc.^[15] In the fourth month of pregnancy, the foetus heart which is the seat of consciousness becomes active, hence it expresses its desires through the mother, and this state is called *Dauhrda* (Bi-Cardiac Phase). The wishes and desires of *Dauhrdini*, if not honoured and gratified, may lead to various physical and psychological congenital abnormalities and mental derangements.^[16]

During the process of delivery and neonatal period measures should be tried to prevent complications like prolonged delivery, injury to fetal skull, hypoxia & asphyxia which may vitiate *Vata Dosha*.

Yuktivyapashraya Chikitsa

Dosha Pachana therapy or detoxification

Agni (Digestive fire) is the factor responsible for preventing toxins entry into the system and detoxification of the internalised toxins.^[17] In autistic children *Agni* is unable to perform these functions properly. *Srotas* are the channels in the body which carry *Ahara Rasa*, *Doshas*, to various *Dhatus*.^[18] Extrinsic or intrinsic toxins in the system causes *Srotoavrodha* (obstruction of these *Srotas*), which results in the malfunctioning of various *Dhatus* and disturbing the internal environment of the body. As a result *Oja Kshaya* happens in the body which leads to poor immunity, recurrent infections, and uncommon behavioural symptoms^[19] which is the result of *Manovaha Srotas Dushti*. *Mana* is the one which connects *Jnanendriyas* (sensory system), *Karmendriyas* (motor system) and *Budhi* (*Atama*).^[20] Hence disruption in the *Manovaha Srotas* leads to the abnormal and under functioning of sensory perception and motor responses. For the proper correction of all these factors *Agni* should be managed. *Agni* ensures the proper operation of *Srotas*, detoxification of toxins; facilitate proper nutrition to *Dhatus*, proper functioning of *Manovaha Srotas* and formation of *Ojas*.^[21] In order to stabilise *Agni* certain medication and therapies are described in Ayurvedic texts viz. *Agni Deepanam* i.e augmentation of *Agni* through *Deepana* and *Pachana* drugs and procedure. *Deepana* drugs are those *Dravyas* or *Karma* which increases the *Agni* but are incapable of *Ama Pachana* (semi-digested food articles metabolism). *Acharya Charaka* has described *Deepaniya Mahakashaya* i.e. *Pippali*, *Pipra Mula*, *Chavya*, *Chitraka*, *Adarak*, *Amlavetasa*, *Maricha*, *Ajamoda*, *Bhallataka Asthi* and *Hingu* which can be used for the above purpose.

Panchkarma therapy

The protocol for autism is focussed on removing toxins from the system, to nourish and to energise the cells.

Panchakarma is helpful in the mobilisation of toxin layer and excreting them from the body.^[22] *Basti* (enema),^[23] *Snehana* (oleation therapy),^[24] *Sirodhara* (pouring liquids over the forehead)^[25] and *Nasya* (nasal drops)^[26] are few of the therapies applicable in children. However appropriate procedures should be selected based on the intellect of the physician.

Application of Medhya Rasayana (CNS rejuvenators)

The administration of *Medhya* drugs in autistic patients is to maintain and restores the body's harmony, improving balance between brain and nervous system. Some of the drugs applicable in these conditions are enlisted in table 2.

Yoga therapy

Pranayam (breathing technique), *Asanas* (postures), *Bandhas* and *Mudras* (relaxation and meditation) promotes physiological and psychological processes which can induce calm state of mind. It provides an environment which improves sensory incorporation, attention, defensiveness and increased verbal receptivity.^[35] Few research studies suggest practising *Yoga* may have a positive effect on CNS like improving the wave frequencies, glucose metabolism, neurotransmitter activity and the autonomic nervous system all of which are affected in disruptive behaviour.^[36] *Yoga* may prove to be a useful tool for children with Autism and requires a long time application. Few examples of *Yoga* procedures which may help in autism include *Trikonasan*, *Veerbhdhrasan*, *Shahsakasana*, *Parvatasana*, *Sukhasan*, *Shavasana*, *Makrasana*, *Singh Mudra* etc.^[37]

Discussion

The above prevalence is suffice to say that practising paediatrician will definitely encounter the child with Autism. According to Ayurvedic pathophysiology it may be a result of *Beeja Dosha* (genetic factor), *Ahara Dosha* (deprived diet), *Agni Dushti* (digestive fire disturbance), *Medha* (cognition) problems and *Vata Dushti*. Ayurveda offers different modes of *Chikitsa* (treatment) for safe approach in management of Autism in children. Autism needs a long term intervention and the improvements in the patients after each course of management may amplify steadily.

Table no. 2 showing - Medicinal properties of Medhya drugs.

Medhya Drugs	Medicinal Properties
<i>Mandukaparni</i> (<i>Centella asiatica</i>)	Brain growth promoter, ^[27] Nervine tonic ^[28]
<i>Brahmi</i> (<i>Bacopa monnieri</i>)	Memory enhancer, ^[29] Effects CNS ^[30]
<i>Sankhpuspi</i> (<i>Convolvulus pluricaulis</i>)	Memory enhancer, ^[31] Reduces social isolation ^[32]
<i>Guduchi</i> (<i>Tinospora cordifolia</i>)	Anti-stress, ^[33] Memory enhancer ^[34]

Creating awareness among general public regarding the role and importance of *Garbhiniparicharya* [regimen for pregnant women], *Garbhopaghatakar Bhavas* and methods like non-consanguineous marriages (premarital genetic counseling in case of non avoidance of consanguineous marriages) can help in reducing the incidence of pregnancy complication thereby preventing development of Autism directly by altering *Beeja Dosha*. Ayurveda opens a huge door in the management of autism through different ways and shows a ray of hope to those in dark. There is a need to focus future research initiatives in the areas of Ayurvedic management of autism. *Deepan Pachan* drugs may help in treating *Agni Dushti*, judicious application of *Medhya* drugs, *Yoga* therapies and specific drugs, diet regimen along with *Panchakarma* (especially *Basti*, *Shirodhara*, *Nasya* and *Abhyanga*) helps in alleviating *Vata Dushti* and thereby improve the condition of Autism.

Conclusion

Even though the condition has not been mentioned directly in Ayurveda, similar features suggesting Autism has been described. Considering *Vata Dushti* as a prime reason for causing the disease, treatment must be planned according to the child's ability to tolerate the same and towards normalizing the *Vata Dosha*. However Ayurveda advocates prevention of these types of condition as more beneficial measure than managing them.

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