ABSTRACT
Autism spectrum disorder is characterised by triad of qualitative impairment of social behaviour, communication (verbal and nonverbal) skills and associated stereotyping and restrictive behavioural pattern with onset before three Year of age.[1] The estimated global prevalence is 1 to 2 %. The nearest similarity of autism with Ayurvedic diagnosis is Unmada (Insanity). The Lakshanas (features) described in Unmada which are a mixture of features of Vata, Pitta & Kapha singularly or collectively are even seen in Autism. Many Agantuja and Sahaja elements may have resulted in Khavaigunya of Srotas, the channels that nourish the Manas. [2] Predominance of kapha and tamoguna as well as vata and rajo guna leads to genetic anomaly beejadusti and it may lead to the development of autism symptoms in children with abnormal doshas and Panchamahabhutas. Currently available therapy in conventional system of medicine is Palliative, whereas in Ayurveda Specific Medhya Rasayana may play a key role in treatment of autism.

KEYWORDS: Autism, Unmada, Ayurveda, Khavaigunya, beejadusti, Rasayana.

INTRODUCTION
Autism is not a disease, it is a well-defined neuro-behavioural a and neuro-developmental disorder which results in a broad range of behaviours and often lifelong impairments.[3] Autism is characterised by involvement of lack of communication, social interaction and repetitive behaviour are characterised by difficulties communicating, interacting socially and engaging in repetitive behaviours. In certain cases, autistic children may have difficulty communicating with one another, or they may avoid looking your way when you speak to
them. The definite aetiology is not known but many environmental predisposing factors may be responsible for the occurrence of these disorders. Autism has many characteristics with Unmada that described in Ayurveda. The mental status of mother plays an important role for both physical and mental development of child. Poorvajanit karma, Maithunacharya of parents, mithyaaharavihara lead to deranged mental growth (Garbhopaghatkar bhava) leads to impaired development of brain and mind. Understanding etiopathogenesis of Autism plays an important role in the treatment of Autism.

ETIOPATHOGENESIS

Etiopathogenesis of autism may predominantly evolve from khavaigunya as consequence of various sahaja (genetic) & agantuja (Epigenetic toxic insults & postnatal environmental factor) hetus.[2]

Vata Dosha is a prime factor responsible for the neurological as well physiological functions of the body. Dushti of Vata is the most important reason in developing the features of autism.

Matruj and Pitruj bhavas - Matruj bhava consist of majja which is important for development of brain (Mastulunga). Atmaj bhav contribute chetana, buddhi, dhriti, smiriti, and its vaigunya can cause impairment of function of mind.

Garbhopghatkar bhavas - Maithunacharya of parents that is abnormal thoughts and abnormal periconceptional activities.

Improper Garbhinicharya that is ill thinking nature, ahara and vihara of mother seriously affect the mental function of the child. So mental and physical status of mother during pregnancy can influence development of Autism.[4]

Katu amla Pradhana Aharas Manasika Vikaras like Krodha, Vishada, Bhay, improper Dinacharyas of mother lead to vitiation 0f Tridosha and vitiation of Rajas and Tamas guna responsible for the development of autism.

Such Garbhopghatkar bhavas causes abnormal dosha and Panchamahabhutas. The predominance of kapha and tamoguna can contribute development of symptoms of children with Autism also predominance of Vata and Raja give rise to emotional, social, communicational, learning problem of children (Beejdushti).
Sahajanidana (genetic factor) – The state of health and disease are determined by the relative presence of tridosha since the formation of embryo in the womb. Kapha is Tamabhuyistam. Predominance of kapha and tamo guna can contribute development of vishada, nastikam, adharmasheela, budhinirodha, ajnanam in child, likewise predominance of vata and rajas guna contribute development of dukhabahutwam, tadansheelata dambam and krodha in children. This may cause deranged in the genetic material which may leads to Beej dushti and susceptible to autistic disorder.

Janmottar – Since neonatal period khaphaj ksheer and Vataprapakopak ahar vihara leads to tridosha dushti which may cause Manas dushti further aggravates the hypofunction of dhi, dhriti and smiriti.

Aagantuja - Internal or external injury to the developing brain (shirobhighata) some invisible ill elements (bhutavesh) infections and poisoning leads to tridoshadushti and by vata. It ultimately can affect the mental and physical development of child.

Strotoavarodh - Agni (Digestive fire) ensures the proper operation of Srotas, detoxication of toxins; facilitate proper nutrition to Dhatus, proper functioning of Manovaha Srotas and formation of Oja. When Agni is unable to perform functions properly Srotas (Channels which carry nutrition Ahara Rasa, Doshas, to Dhatus)\(^{(5)}\) causes Srotoavrodha (obstruction of these Srotas). Srotoavrodha causes Oja Kshaya which leads to Manovaha Srotas Dushti.\(^{(6)}\) Mana is Ashraya for Jnanendriyas (sensory system), Karmendriya (motor system) and Buddhi (Atama).\(^{(7)}\) Hence disruption in the Manovha Srotas leads to the abnormal and under functioning of sensory perception and motor responses.

CLINICAL FEATURES OF AUTISM & THEIR RELATION WITH DOSHA
Autism can be considered as a Thridoshaja disease which affects Prakruthi of body and mind within Garbhashaya itself.

Kapha: Tamoguna of Kapha causes Vishada (depression), Budhinirodha (problems with intellect) etc.

Vata: Chala guna of Vata results in stereotypic movements.\(^{(8)}\)

Pitta: Rajoguna of Pitta cause Krodha (anger), self-hurting nature etc.

According to Ayurveda mind is responsible for both sensory and motor functions, abnormality of mind results in improper motor and sensory functions.
**Pranavayu** - which in turn causes for hyper-perception, hyper-attention & hyper memory (i.e., impairment of functions of *manas & buddhi*).

**Vyana vayu** - may responsible for stereotyped repetitive behavior, hypersensitivity to light, touch & sound and lack of eye communication.

**Udanvayu** - may result into echolalia and language impairment

**Sadhak pitta** - may cause fear, anxiety and phobia. These features, ultimately contribute to lack of communication & social impairment

**Majja** (marrow) which is important in development of *Masthulunga* (brain) is a product of *Mathruja bhava* (properties inherited from mother).

### PREVENTION OF AUTISM

1] **Before conception** - Acharya Charak has prohibited consanguineous marriage, citing it an one of the prime causes for developing genetic and congenital disorders and modern science also suggested that.\(^9\)

2] **During pregnancy** (ANC) – For healthy pregnancy, Pregnant women need for proper *ahara* (avoid alcohol, junk food, etc.) and *vihara* (stress, exertion, etc.) to avoid *Garbhopghatkara bhavas* which can lead to various psychological disorders like *Mudha* (dull), *Nidralu* (inactive/sleepy), *Unmadi* etc.\(^10\)

In the fourth month of pregnancy, mother called as *Dauhrda* (Bi-Cardiac Phase). When foetus heart expresses some desire. The wishes and desires of *Dauhrdini*, if not honoured and gratified, may lead to various physical and psychological congenital abnormalities and mental derangements.\(^11, 12\)

3] **During the process of delivery** - Prevent complications like prolonged delivery, injury to foetal skull, hypoxia & asphyxia which may vitiate *Vata Dosha*.

4] **During neonatal period of child**: Neonatology in Ayurveda focuses on preventing birth Asphyxia, which is a significant cause of autism, by using the *Pranpratyagamana* (resuscitation) method, which involves cleaning the *Mukhasleshma* and providing physical stimuli along with *Pranvayu* (oxygen) through the *Krishnakapalikasupa* hollow tube.
THREE TYPES OF CHIKITSA PLAY SIGNIFICANT ROLE IN TREATING AUTISM

1] Yuktiyapashraya chikitsa

Dosha Pachana therapy or detoxification

Agni ensures the proper operation of Srotas, detoxification of toxins; facilitate proper nutrition to Dhatus, proper functioning of Manovaha Srota.\textsuperscript{[13]} Acharya Charaka has described Deepaniya Mahakashaya for Deepan and Pachana i.e., Pippali, Pipra Mula, Chavya, Chitraka, Adarak, Amlavetasa, Maricha, Ajamoda, Bhallataka Asthi and Hingu.

To detoxify Panchakarma therapies are advised according to the intellect of the physician.\textsuperscript{[14]} Basti (enema),\textsuperscript{[15]} Snehana (oleation therapy),\textsuperscript{[16]} (pouring liquids over the forehead)\textsuperscript{[17]} and Nasya (nasal drops)\textsuperscript{[18]} are few of the therapies applicable in children.

These include internal medication especially Ghrita preparations, medical herbs, and external treatments like Nasya, Dhupana, Doopanam, Vaman, Virechan, Shiropichu tailam, Talapothichhil/Shirolepa, Shirodhara, Udvartan, Udsadan, Annaelepan, Patrapottali, Pindasweda, Kwathdhara, Takradhara, Kanjidhara or Tailadhara etc.

**Internal medication:** Mahapaisachika ghrita, Mahachaitasa ghrita, Mahakalyanaka ghrita, Panchagyvya ghrita, Bramhighrit, Kalyanaka, GuduchyadiBhringrajadighrit et these should be selected based on the Manodoshavastha.

**External medication:** Himsagaratal, ksherbala tail, shudhhabala tail are found to be effective in this disorder. Used in older for pichu dharnam and abhyanga, shirodhara and basti Shirolepa to help sleep disturbances.

Lepa over anterior fontanel - Panchagandha choorna, Kachuradi choorna these may be mixed with any of the above-mentioned tail.

Sarira abhyanga helps to calm down the nervousness in the subjects, taila should be used like Mashadi tail and Lakshadi tail.

**Medhya Rasayana (CNS rejuvenators)**

To maintain and restores the body’s harmony, improving balance between brain and nervous system.

Medicinal properties of Medhya drugs.

Properties Mandukaparni (Centella asiatica) Brain growth promoter,\textsuperscript{[19]} Nervine tonic\textsuperscript{[20]}
Brahmi (Bacopa Monnieri) - Memory enhancer, Effects CNS\textsuperscript{[21]}

Sankhpuspi (Convolvulus Pluricaulis) - Memory enhancer,\textsuperscript{[22]} Reduces social isolation

Guduchi (Tinospora cordifolia) - Anti-stress, Memory enhancer.

**OTHER**

Suvarna with ghrita, vacha and kushta, Arkapushpi ghrita suvarna, vacha with madhu.

Suvarna churna khadira, shwetdurva, and ghrita with madhu.

Saraswatarishta, Unmdgajakesariras with milk, ghrita

2) **Satvavajayachikitsa**

Buddhiniyaman\textsuperscript{[23]} by Sadvritta, Achar Rasayan\textsuperscript{[24]} and Trasan (act to deviate mind by frightening or eliciting painful stimulus), Yoga, meditation.\textsuperscript{[25]}

This also include providing awareness to the parents regarding nature of the disease and providing environmental modification for encouraging desired behavior.

3) **Daivayapashraya chikitsa**

Ayurveda uses various psychological measures for getting the desired effect of a therapy or condition not responding to treatment.

This comprises of chanting of hymn, offerings etc.

All this practice acts at the psychological level.

As we know that faith is the part and parcel of psychology.

**CONCLUSION**

Autism is not only a disease confined to a particular person or family, society also has a big role in the management because autistic children need special attention and care.

Autism which corresponds to those mentioned under *Unmada Nidana* and *Unmada Chikitsa* in Ayurvedic classics and the results are discussed with possible conclusion in the light of principle of etiopathology and management explained in classical Ayurvedic textbook.

Social awareness is most important. With its holistic and authentic approach, Ayurveda gives new hope in management of ASD.

Combination of Panchakarma therapies, *Medhya Aushadhas* with yoga and diets will improve quality of life of autistic children to a great extent.
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10. Ibidem Charaka Samhita (5), Sharir Sthan, Chapter 1 Verse 3-4, 830.
11. Ibidem Charaka Samhita (5), Sharir Sthan, Chapter 8 Verse 21, 928-929.


