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AYURVEDIC APPROACH TOWARDS AUTISM SPECTRUM DISORDER: A CASE REPORT

Ayurveda

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ABSTRACT

Autism Spectrum Disorder is a neuro developmental disorder that mainly affects the behaviour and communication. According to Diagnostic and Statistical Manual of Mental Disorders (DSM-5), Children with ASD may have difficulty in communication and interaction with other people, restricted interests, repetitive behaviours and symptoms that affects the normal quality of life in school, work and other areas of life. Autism can be understood and analyzed under the heading of Unmada in Ayurveda. The lakshanas of vataja,pittaja and kaphaja unmadas are usually observed in Autism Spectrum Disorder. A 4.5 year old male child was brought by his parents to the Bala Roga (Pediatric) OPD of Sri Jayendra Saraswathi Ayurveda Hospital, Chennai with the complaints of inconsistent eye contact, hyperactive behaviour, temper tantrums, Occasional head banging, over sensitive to touch, delay in speech observed since the age of 2 years. A 10 days Ayurvedic treatment protocol was framed comprising vyatasa chikitsa to stimulate neuroplasticity in the brain by giving alternate stimuli. Along with that brumhana chikitsa was also done with the help of Medhya dravyas for improving the intellect, speech and behaviour.

KEYWORDS

Autism, Medhya dravyas, Unmada, Vyatasa Chikitsa,

INTRODUCTION:

Autism Spectrum Disorder is a neuro developmental disorder that mainly affects behaviour and communication. It's symptoms usually started appearing in the first two years of life. According to Diagnostic and Statistical Manual of Mental Disorders (DSM-5), Children with ASD may have difficulty in communication and interaction with other people, restricted interests, repetitive behaviours and symptoms that affects the normal quality of life in school, work and other areas of life. Clinical features of ASD includes inconsistent or lack of eye contact, slowness in responding to someone calling their name, rarely sharing enjoyment of objects or activities by pointing or showing it to others, difficulty in understanding others point of view, inability to predict or understand other people's actions, repeating word or phrases – echolalia, having focused interests, getting upset by slight changes in routine, hyper or hyposensitive to sensory inputs – light, noise, temperature and clothing. Risk factors of ASD include having a sibling with ASD, having older parents, children with genetic conditions like Down syndrome, Fragile X Syndrome and Rett syndrome, advanced age of parents, low birth weight baby etc.[1]

Case Report:

A 4.5 year old male child was brought by his parents to the *Bala Roga* (Pediatric) OPD of Sri Jayendra Saraswathi Ayurveda Hospital, Chennai with the complaints of inconsistent eye contact, hyperactive behaviour, temper tantrums, occasional head banging, over sensitive to touch, delay in speech observed since the age of 2 years. According to his mother, the child was a normal healthy baby born under normal vaginal delivery. There were no history of antenatal and postnatal complications or infections for the mother. But the mother stated that she was having mental stress during the antenatal period because of some family issues.

The child's birth weight was 3 kg and cried immediately after birth. The child was exclusively breastfed till the age of 1 and half years. From the age of 2 years the mother observed some changes in his behaviour like lack of consistent eye contact, delay in response to being called by his name and difficulty in speech. The child was clinically diagnosed with Autism Spectrum Disorder after assessing with Indian Scale for Assessment of Autism and got admitted at Sri Jayendra Saraswathi Ayurveda College and Hospital and an Ayurvedic treatment protocol was framed and administered which gave significant improvement in his symptoms.

ASD Screening, Assessment And Diagnosis:[2]

- Diagnosis was made clinically as Autism Spectrum Disorder based on history, presenting features and observation of the child.
- No specific laboratory tests or clinical markers to diagnose autism.
- Assessment tool used - Indian Scale for Assessment of Autism developed by National Institute for the Mentally Handicapped, (Ministry of Social Justice and Empowerment, Govt.of India)
- ISAA score at the time of admission – 122 (Moderate Autism)
- Ayurvedic diagnosis – *Unmada (Vataja and Pittaja Unmada Lakshanas)*

Treatment Protocol:

Sr No	Date	Treatment	Observations
1	20.03.23	• Ruksha Churna Pinda Sweda with Kolakulathadi Churnam • Takra dhara to Shiras – Musta Amalaki Kashayam • Thalapothichil (shiro lepam) – Musta Churnam+ Amalaki Churnam+ Panchagandha Churnam (each 50 gms) • Matra vasthi with Kalyanaka Ghritam 20 ml+1/2 Bilwadi Gutika +3 pinches of Vacha Churnam	• Inconsistent eye contact • Hyperactive behaviour • Occasional head banging • Emotional tantrums • Over sensitive to touch • Delay in speech
2	21.03.23 – 22.03.23	• Sarvanga Abhyanga with Maha Narayana Tailam followed by Dashamoola Ksheera Dhara • Shiro Pichu with Dhanwantaram Tailam • Matra Vasthi Kalyanaka Ghritam 20 ml+1/2 Bilwadi Gutika +3 pinches of Vacha Churnam	-do-
3	23.03.23	• Ruksha Churna Pinda Sweda with Kolakulathadi Churnam • Takra dhara to Shiras – Musta Amalaki Kashayam • Thalapothichil (Shiro lepa) – Musta Churnam+ Amalaki Churnam+ Panchagandha Churnam (each 50 gms) • Matra vasthi with Kalyanaka Ghritam 20 ml+1/2 Bilwadi Gutika +3 pinches of Vacha Churnam	• Reduction in emotional tantrums • Reduction in hyperactivity • Improvement in eye contact • No head banging

4	24.03.23 – 25.03.23	• Sarvanga Abhyanga with Maha Narayana Tailam followed by Dashamoola Ksheera Dhara • Shiro Pichu with Dhanwantaram Tailam • Matra Vasthi Kalyanaka Ghritam 20 ml+1/2 Bilwadi Gutika +3 pinches of Vacha Churnam	• Reduction in hypersensitivity to touch. • Improvement in sleep quality. • No other findings
5	26.03.23	• Ruksha Churna Pinda Sweda with Kolakulathadi Churnam • Takra dhara to Shiras – Musta Amalaki Kashayam • Thalapothichil (Shiro lepam) – Musta Churnam+ Amalaki Churnam+ Panchagandha Churnam (each 50 gms) • Matra vasthi with Kalyanaka Ghritam 20 ml+1/2 Bilwadi Gutika +3 pinches of Vacha Churnam	• Significant improvement in hyperactivity and eye contact. • As per the mother he immediately responds on being called and the eye contact is persisting also. • No head banging and significant reduction in anger.
6	27.03.23 - 28.03.23	• Sarvanga Abhyanga with Maha Narayana Tailam followed by Dashamoola Ksheera Dhara • Shiro Pichu with Dhanwantaram Tailam • Matra Vasthi Kalyanaka Ghritam 20 ml+1/2 Bilwadi Gutika +3 pinches of Vacha Churnam	• Hypersensitivity to touch and temperature reduced significantly and he was fully cooperating to all the treatments.
7	29.03.23	• Ruksha Churna Pinda Sweda with Kolakulathadi Churnam • Takra dhara to Shiras – Musta Amalaki Kashayam • Thalapothichil – Musta Churnam+ Amalaki Churnam+ Panchagandha Churnam (each 50 gms) • Matra vasthi with Kalyanaka Ghritam 20 ml+1/2 Bilwadi Gutika +3 pinches of Vacha Churnam	• Significant reduction in all above said complaints. • As per the mother the child is trying to communicate using new words.

Oral medications (20.03.23 – 29.03.23):

- *Draksharishtam +Saraswatharistam* with gold – 7.5 ml each BD after food
- *Bilwadi gutika* – 1-0-1 A/F
- *Vacha Churnam +Rudraksha Churnam+ Rajanyadi Churnam* – ½ tsp twice daily (morning and evening) before food with honey
- *Kalyana Avaleha Churnam* – for orofacial massage once daily with honey (20 seconds)

Outcome:

Indian Scale for Assessment of Autism

Total score before treatment – 122 – Moderate Autism

Total score after treatment – 87 – Mild Autism

Sr No	Parameter in Indian Scale for Assessment of Autism	Score BT	Score AT
1	Lacks social smile (pitta)	3(frequently)	4 (mostly)
2	Unable to relate to people (pitta and vata)	5 (always)	3 (frequently)
3	Unable to take turns in social interaction (vata)	3 (frequently)	1 (rarely)
4	Shows inappropriate emotional response (vata and pitta)	3 (frequently)	2 (sometimes)
5	Lacks fear of danger (pitta and vata)	3(frequently)	2(sometimes)
6	Excited or agitated for no apparent reason (vata and pitta)	3 (frequently)	2 (sometimes)
7	Unable to grasp pragmatics of communication (real meaning) (pitta and kapha)	2 (sometimes)	1 (rarely)
8	Engages in stereotyped and repetitive motor mannerisms (vata)	3 (Frequently)	2 (sometimes)
9	Shows attachment to inanimate objects (vata)	2 (sometimes)	1 (rarely)
10	Shows hyperactivity/restlessness (vata)	3 (frequently)	2 (sometimes)
11	Engages in self injurious behaviour (pitta)	2 (sometimes)	1 (rarely)
12	Insists on sameness (kapha)	3(frequently)	1 (rarely)
13	Unusually sensitive to sensory stimuli (vata and pitta)	3 (frequently)	1 (rarely)
14	Insensitive to pain (kapha)	4 (mostly)	1 (rarely)
15	Responds to objects/people unusually by smelling, touching or tasting (vata)	4 (mostly)	2 (sometimes)
16	Inconsistent attention and concentration (pitta and vata)	4 (mostly)	3 (sometimes)
17	Shows delay in responding (kapha)	3(frequently)	2(sometimes)

Discharge Medications (for one month):

- *Maha Kalyanaka Ghritam + Vacha Churnam + Rudraksha Churnam + Rajanyadi Churnam* – 1 tsp *ghritam* with ½ tsp *churnam* before food morning and evening.
- *Saraswatharishtam* with gold +*Draksharishtam*- 10 ml-0-10 ml after food
- *Bilwadi Gutika* – 1-0-1 A/F
- *Kalyana Avaleha Churnam* – for orofacial massage (once daily)
- *Maha Narayana Tailam* – for abhyanga preferably in the evening
- *Shiro talam* with *Dhanwantaram Tailam + Jadamayadi churnam* (daily for one hour)

DISCUSSION:

This case of Autism Spectrum Disorder may be understood under the heading of *Unmada*. Here in this case the *nidanam* is *beeja dosha* (genetic factors) and *chintha* (stress)which results in *Kha Vaigunyata* in the *rasa vaha* and *mano vaha srotas*. *Lakshanas* of *vataja* and *pittaja unmada* were mostly observed in the patient. *Vataja Unmada lakshanas* include lack of consistent eye contact *(akasmat akshi vikshepana)*[3].This *lakshana* indicates the *vata dushti* with *chala guna vruddhi*.Hyper active behaviour was present in the patient. This indicates the *vataja unmada lakshana* i.e *parisaranam ajasra* which occurs due to *vata dushti* with increased *chala guna*. Emotional tantrums in this case is correlated with *pittaja unamada laksha*na i.e *krodha*.This indicates *pitta dushti* with *teekshna guna vruddhi*. Occassional banging is observed in the child which is correlated with *pittaja unmada lakshana i.e abhihananm* with *sastra loshta* etc[4].This feature again indicated *pitta dushti* with *teekshna guna vruddhi*.The child was hypersensitive to touch and temperature. This is correlated with *pittaja unmada lakshana* i.e *prachaaya sheeta anna jala abhilasha*. Unusual sensitive to usual stimuli indicates *vyana vata* as well as *bhrajaka pitta dushti*.The delay in speech is attributed to *udana vata dushti* caused by *kapha avarana*. The similar clinical feature is also observed in *kaphaja unmada i.e tushnim bhavam.*The treatment was administered in a *vyatasa krama* with the aim of improving the neuroplasticity and neuronal migration in the brain.The *snidgha* and *ruksha chikitsa* were done in alternate manner in the proportion of 2:1. The *snigdha chikitsa* administerd to body include *Abhyanga* with *drava sweda* keeping in view of the involvement of *pitta dosha*. *Abhyanga* was done with *Maha Narayana Taila* due to the involvement of *pitta anubandha vata* in this case.The *snigdha chikitsa* to head was administered in the form of *shiro pichu* with *dhanwantaram tailam*. *Sheeta brumhana* was done in this case to both *shiras* and *kaaya* considering the role of *pitta* involvement along with *vata dushti. Ruskha chikitsa* was administered to *shiras* and *kaaya* for providing a contrasting stimulus to that of *snigdha chikitsa*. *Rukshana* to *shiras* was administered through *thala pothichil (shiro lepa) and Takra dhara.Thala potichil* was done with *Pancha Gandha Churnam* incombination with *vatahara churnas* like *musta amalaka* etc to reduce the temper tantrums and also to improve the sleep quality. *Rukshana* to *kaaya* is administered in the form of *ruksha churna pinda sweda*. *Matra vasthi* was administerd from the day 1 with *Kalyanaka ghritam* with *Dhanwanatarm mezhuku pakam* combined with *Bilwadi gutika* and *Vacha churnam.Bilwadi gutika* was added as *churnam* in *matra basthi* to prevent the formation of *ama* as well as to stimulate neuronal migration.The purpose of administration of *matra basthi* was mainly to reduce the hyper activity and also to improve the speech. *Medhya rasayanam* was given internally through *Saraswatharishtam* with gold. *Drakasharishtam* was administered in combination of *Saraswatharishtam* to reduce the *pitta dushti lakshanas* observed in the patient and also for the purpose of *mala shodhanam* thereby

achieving *vata shamanam .Vacha, Rudraksha* and *Rajanyadi Churnam* were given internally in combination with the purpose of improving the speech as well as to maintain the gut health. Orofacial massage with *Kalyana avaleha churnam* was also done to improve the articulation thereby helps in speech.

CONCLUSION:

Autism Spectrum Disorder can be understood in Ayurveda as *Unmada*. Every autistic child is different with difference in the predominance of doshas. Clinical features of *Vataja* and *Pittaja Unmada* were predominantly observed in the present case. To improve the neuroplasticity contrasting stimulus were given to head and body by the administration of *Vyatasa chikitsa (snigdha* and *ruksha)* along with *medhya rasayana chikitsa*. Gut health was given prior importance during the entire treatment protocol. Patient was assessed before and after treatment with Indian Scale for Assessment of Autism. Significant improvement were observed in 17 out of 40 parameters within 10 days of treatment. There was difference in total score from 122 to 87 indicating significant improvement in the behaviour of the child.

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