

Ayurvedic Management of Autism Spectrum Disorder in A Four-Year-Old Child: A Case Study

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ABSTRACT

Background and Aim: Autism Spectrum Disorder (ASD) is a complicated neurodevelopmental condition characterized by repetitive behaviors, limited interests, and difficulties with social interaction. In moderate to severe cases, conventional medicines frequently offer little long-term benefit. The purpose of this case study was to assess the effectiveness of Ayurvedic treatment in treating a pediatric patient's moderate ASD symptoms. **Methods:** A 4-year-old male presented with persistent hyperactivity, slurred monosyllabic speech, poor eye contact, communication difficulties, and poor social interaction. Clinical assessment suggested features resembling Unmada with Vata-Kapha dominance and Manovaha Srotas involvement. An individualized treatment protocol was administered over a period of 3 months (April – June 2026), including Medhya Rasayana for cognitive enhancement and Panchakarma therapies such as Abhyanga, Nadi Sweda, Matra basti, Shiropichu & Nasya. These were done for three sittings and Basti (administered in two sittings). The therapeutic goal was to pacify Vata-Kapha Dosha, nourish Majja Dhatu, and support Buddhi, Smriti, and Samjna Jnana. **Observations and Results:** Gradual improvements in social interaction, communication, attention span, and emotional regulation were observed during the course of the treatment. Parents observed increased peer involvement, greater routine adaptation, and decreased irritation. Clinical observations verified that behavioral problems had stabilized with no significant side effects. **Conclusion:** Through customized protocols that target doshic imbalance and neurocognitive function, this example demonstrates the potential of Ayurveda in the comprehensive care of ASD. Larger controlled research and long-term follow-up are necessary to confirm the efficacy and create uniform standards for Ayurvedic treatment of neurodevelopmental problems, even though the results were encouraging.

Keywords: Autism Spectrum Disorder, Ayurveda, Unmada, Medhya Rasayana, Vata Dosha, Neurodevelopmental Disorder.

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INTRODUCTION

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder characterized by deficits in social communication and interaction, along with

restricted and repetitive patterns of behaviour. Atypical reactions to sensory input, difficulties switching between tasks, and an intense focus on particular details are just a few of the unusual behavioral and activity

patterns that people with ASD may display.(1) During the first five years of life, these symptoms typically appear. Even though they start in early childhood, ASD usually persists into adolescence and adulthood. In India, the prevalence of ASD varies between 0.15% and 1.01%. (2) Autism spectrum condition affects 1 in 160 children worldwide, and boys are diagnosed with it more frequently than girls. peractivity disorder (ADHD), in addition to unpleasant behaviors like self-harm and trouble sleeping.

Autism Spectrum Disorder (ASD) is not directly correlated with Ayurveda, but it can be classified under the category of Unmada (4), which is more similar to Vata-Kaphaja Unmada. It is characterized by lakshanas like Aspasta vak (unclear speech), Buddhi vibhrama (impaired intellect), Smrti vibhrama (memory disturbances), Ati pravrtta cheshta (abnormal or excessive movements), Ekanta sevana (isolation), and Swapna nasa (disturbed sleep). These characteristics are indicative of the dominance of the Vata and Kapha doshas, which impact the Manovaha Srotas and cause disruptions in behavior, communication, and thought.

This correlation is based on the finding that many of the hallmarks of ASD, like a propensity to stay put, a preference for solitude, avoidance of social interactions, limited speech or communication, repetitive motor behaviors, frequent self-stimulatory actions, and repetitive speech patterns like echolalia, closely resemble the manifestations described in Vata-Kaphaja Unmada. (5) At the moment, traditional clinical procedures lack a clear treatment protocol or effective care for the prevention of ASD, and therapy is primarily supportive. Therefore, exploring the potential role of Ayurvedic interventions becomes relevant. The present case study will discuss a 4-year-old male patient with ASD and its management through Ayurvedic therapeutic interventions.

Case Report

A 4-year-old boy with autism spectrum disorder (ASD) was treated using the Unmada chikitsa framework, which is mentioned in Ayurvedic literature, based on his initial clinical symptoms and their diagnostic examination. This case demonstrates how Ayurvedic treatment can offer significant benefits in the management of conditions like ASD, where conventional treatments are mainly supportive, when it is in line with suitable classical correlations and a methodical understanding of Unmada characteristics.

Patient information

De-identified patient data

A male aged 4 years, living in Pimpri, Pune (Maharashtra), was brought to the Kaumarabhritya

outpatient department of the Dr. D.Y. Patila hospital in April 2026.

Patient concerns and symptoms.

The patient presents with persistent behavioral concerns primarily involving difficulty in social interaction and poor concentration. He had persistent hyperactivity, slurred monosyllabic speech, poor eye contact, communication difficulties, and poor social interaction. These symptoms have been ongoing and significantly interfere with his social and academic performance. The behavioral disturbances are noticeable in both home and social environments.

Clinical history and symptomology

A 4-year-old male who reported to the outpatient department of Kaumarabhritya in the Dr. D.Y. Patila hospital with a chief complaint of experiencing persistent hyperactivity, slurred monosyllabic speech, poor eye contact, communication difficulties, and poor social interaction since early childhood. Parents noticed limited eye contact, reduced response to social cues, and minimal interest in peer relationships from around the age of 2 years. Speech and language development were delayed; meaningful words began only after the age of 3 years. The patient frequently repeats words or phrases (echolalia) and often engages in self-talking. He shows restricted and repetitive behaviors, including hand-flapping, lining up objects, and insistence on routine. Any change in the daily schedule leads to significant distress and emotional outbursts. He has difficulty understanding emotions, abstract concepts, or non-verbal communication. The patient often isolates himself, avoids social gatherings, and becomes irritable when forced to engage. With this background, the patient was brought to Dr. D.Y. Patila hospital for an Ayurvedic consultation and treatment.

Previous medical illness

Nil

Family history

Not significant

Birth history

The child was born full-term via Lower Segment Caesarean Section (LSCS) with a birth weight of 3.8 kg. The cry was immediate after birth, and there was no history of seizures, pathological jaundice, hypoglycaemia, meningitis, etc.

Developmental history

The child showed delayed developmental milestones in a number of areas. Around 2-3 months of age, neck holding was accomplished, and by 9 months, sitting unassisted was accomplished. Around 14 months was

when standing with assistance started, and around 14 months was when independent walking started. Pincer grasp and other fine motor abilities took 15 months to develop. The child's speech development was severely delayed; around the age of three, he began using meaningful words. Social and adaptive behaviors, like reacting to names, keeping eye contact, and playing appropriately, were clearly lacking and still exhibit impairment. With noticeable delays in speech and social interaction, overall development has remained below age-appropriate levels.

Immunization history

The child has been fully immunized according to the national immunization schedule.

Personal history-

- Diet: Vegetarian
- Sleep: Disturbed
- Appetite: Reduced
- Bowel movements: 1–2 times/day, satisfactory
- Micturition: 4–5 times/day and 1–2 times/night

Clinical findings

On general examination, the patient appeared visibly irritable, displaying repetitive behaviors and marked hyperactivity. He showed poor social communication, avoided direct eye contact, and was unable to fix his gaze on any specific object or person.

The patient was conscious but disoriented to time, place and person. He exhibited poor attention span and lack of concentration, although his memory functions appeared intact. Social interaction, communication skills, and speech-language development were delayed. Speech was slurred and lacked proper articulation on evaluation. Physical growth was appropriate for age. However, the patient had reduced appetite and disturbed sleep. Vital signs were within normal limits: pulse 84/min, RR 24/min, BP 114/72 mmHg, SpO₂ 98%, and temperature 98.2°F. Anthropometric measurements included: height 102 cm, weight 16.3 kg, BMI 15.5 kg/m², head circumference 50.5 cm, chest circumference 52 cm, and mid-upper arm circumference 16 cm.

Ashtavidha Pariksha

- Naadi (pulse): Vata Pitta
- Mootra (micturition): prakruta
- Mala (Defecation): prakruta
- Jihwa (tongue): lipta

- Shabda (Voice): vikruta
- Sparsha (touch): ushna
- Drik (vision): prakruta
- Aakriti (Body structure): Madhyama

Dashavidha Pariksha

- Prakirti (constitution): pittapradhana vatanubandhi
- Vikriti (Pathology): vata and kapha
- Sara (quality of tissue): madhyama
- Samhanana (structural integrity): madhyama
- Pramana (measurement): Madhyam
- Satmya (adaptability): Sarvarasa satmya
- Satva (mental status): avara
- Aahara Sakthi (digestive capacity): madhyama
- Vyayama Sakthi (exercise tolerance capacity): madhyama
- Vaya (stage of life): baala

Systemic Examination Respiratory system

- Inspection: Bilaterally symmetrical chest shape, no scar mark, or bulge.
- Palpation: Trachea centrally placed, no tenderness, chest expansion was symmetrical, normal on both sides.
- Percussion: Resonance present
- Auscultation: AEBE (Air Entry Bilaterally Equal), no significant obstruction or abnormalities.

Cardiovascular system

- Inspection: No distended blood vessels, scars or deformities
- Palpation: apex beat felt
- Auscultation: S1, S2 heard no added murmurs

Gastrointestinal system

- Inspection: No distended blood vessels, scars, or deformities
- Palpation: no tenderness
- Percussion: dull
- Auscultation: bowel sound heard

Central Nervous System Higher Mental Functions

- Consciousness: Patient is conscious but disoriented to time, place, and person.
- Orientation: Impaired.
- Attention & Concentration: Poor, easily distractible, unable to sustain focus.
- Memory: Appears intact for immediate and recent recall.
- Intelligence: Below average.
- Speech & Language: Delayed development, unclear articulation, echolalia present, repetitive self-talking.
- Social Interaction: Poor eye contact, limited response to social cues, minimal peer interaction. Cranial Nerve examination
- No gross cranial nerve deficit detected. Visual tracking and hearing appear intact. Motor System
- Normal bulk, tone, and power.
- No focal neurological deficit, no abnormal movements apart from stereotypies (hand-flapping, lining up objects).
- Sensory System
- Intact to superficial and deep sensations; hypersensitivity to loud sounds and bright lights noted (sensory modulation issues).
- Reflexes: Superficial and deep tendon reflexes are Normal

Table 1 : Timeline of Symptoms, Intervention and Clinical Progress

Treatment Phase	Events	Key Findings / Intervention
Early childhood (2 years of age)	Onset of symptoms	Poor response to name, limited eye contact, and reduced social interaction
Baseline	First hospital visit and admission	Baseline assessment performed using the Indian Scale for Assessment of Autism (ISAA) and Autism Parenting Stress Index (APSI)
1st Sitting (1st Month)	Inpatient treatment	Panchakarma procedures along with oral Medhya Rasayana initiated.
Discharge after 1st Sitting	Clinical reassessment	ISAA and APSI reassessment performed; oral medications and lifestyle advice given
2nd Sitting (2nd Month)	Readmission and treatment	Clinical reassessment performed using ISAA and APSI. Panchakarma procedures continued along with oral medications; caregivers reported reduced irritability and anger outbursts.
Discharge after 2nd Sitting	Clinical reassessment	ISAA and APSI reassessment performed; Brahmi taila nasya added
3rd Sitting (3rd Month)	Final evaluation	Final assessment performed using ISAA and APSI; patient advised to continue medications and lifestyle measures.

Diagnostic Assessment**Diagnostic Methods**

Diagnosis was confirmed using the Indian Scale for Assessment of Autism (ISAA) (6), which serves as an objective assessment tool for individuals with autism. An additional evaluation of the Autism Parenting Stress Index (APSI) was used to assess the stress level of the parent. (7) In Ayurveda, diagnosis is established based on nidana panchaka. By correlating the child's clinical presentation with Ayurvedic principles and diagnosis was established. (8)

Diagnosis

According to the clinical history, the patient exhibits ongoing challenges in social communication and interaction, along with delayed speech and language development, echolalia, restricted and repetitive behaviors, a strong preference for routine, and sensory sensitivities. These characteristics align with a diagnosis of Autism Spectrum Disorder (ASD) at a moderate severity level, impacting both social and academic performance. As per Ayurveda, ASD is considered an anuktavyadhi (a condition not directly described in the Ayurvedic texts). However, the clinical presentation of the patient closely resembles features of Vata-kaphaja Unmada, as described by Acharya Charaka and Sushruta. Out of the classical rupas of unmada, the patient presented with several overlapping features, such as Ekantsevi (preference for isolation), Ashpashta vak (unclear speech), vikrut chesta (echolalia), krodha (anger issues), swapnanasha (disturbed sleep), and smrti vibhrama (memory disturbances). He also exhibited purvarupa like Avakpravrutti (Delayed speech), Vikrit chesta (echolalia), and Anavasthita mana (poor concentration).

Prognosis

The condition can be considered Vatakaphaja unmada, which is usually Yapya (unable to treat but manageable with continuous therapy). (8) Due to chronicity and involvement of manovaha srotas, complete recovery is less expected. With proper medhya rasayana, sattvavajaya chikitsa, and supportive therapies, the prognosis can be improved towards better functional adaptation

Therapeutic intervention

A comprehensive Shamana and Shodhana plan of care was designed with emphasis on balancing aggravated vata and kapha dosa, nourishing the manas and restoring dhi, dhriti and smriti. External therapies were selected for their snigdha, balya and prasadana properties to promote relaxation, improve sleep, and reduce hyperactivity, while supportive procedures addressed srotoshodhana and manovaha srotas stabilization. Internal medications with rasayana and medhya attributes were incorporated to enhance cognitive functions, regulate emotional responses, and sustain long-term behavioral improvement.

External Therapy

During the two treatment sittings, the patient underwent the following Panchakarma procedures:

- Sarvanga Abhyanga with chandanbala Lakshadi Taila was administered daily for 15 days during the first and second sittings .
- Nadi Swed ausing Dashamoola Kashaya was performed following Abhyanga for the same duration.
- Matra Basti using Bala taila (30ml) for 7 days
- Shiropichu with Bramhi taila administered for 15 days during the first and second sittings.

Internal Therapy

- Suvarna prashana
- Sarasvatarishta 5 ml BD with equal quantity of water
- Akkalkara chhurna for Jivha Pratisarana
- Bramhi Ghrita 1 tsp BD
- Mandukparni, Shankhapushpi, Yashtimadhu, Shatavari 125 mg each with Madhu BD The above internal medication was given for 1 month.

Follow up and outcome

The results of intervention were recorded using the Indian Scale for Assessment of Autism (ISAA) and Autism Parenting Stress Index (APSI)

Table 2: Indian Scale for Assessment of Autism (ISAA)

Domain	Max. Score	Baseline	1st Sitting	2nd Sitting
I. Social Relationship & Reciprocity (1-9)	45	34	32	27
II. Emotional responsiveness (10- 14)	25	15	14	12
III. Speech-Language & Communication	45	32	30	24

(15-23)				
V. Behavior Patterns (24-3)	35	25	32	19
V. Sensory Aspects (31-36)	30	19	18	15
VI. Cognitive Component (37-40)	20	15	14	13
TOTAL SCORE	100	140	131	110

Table 3: Autism Parenting Stress Index (APSI)

Sr. No.	Check list	Baseline	1st Sitting	2nd Sitting
1	Your child's social development	2	2	1
2	Your child's ability to communicate	3	3	2
3	Tantrums/meltdowns	3	3	2
4	Aggressive behavior (siblings and peers)	3	3	2
5	Self-injurious behavior	1	1	0
6	Difficulty making transitions from one	2	2	1
7	Sleep problems	3	3	2
8	Your child's diet	0	0	0
9	Bowel problems (diarrhoea)	0	0	0
10	Potty training	0	0	0
11	Not feeling close to your child	0	0	0
12	Concern for the future of your child being accepted by others	3	3	1
13	Concern for the future of your child living	3	3	2
	Total Score	23	23	13

DISCUSSION

This case report highlights a comprehensive Ayurvedic approach to managing ASD, combining classical diagnostic correlations with structured interventions and regular monitoring. It demonstrates measurable improvements in both the child's behavioral symptoms and parental stress, supported by objective scales like ISAA and APSI.

The treatment protocol was designed to perform Samprapti Vighatana, aiming to pacify Vata Dosha,

strengthen Majja and Manovaha Srotas, and restore Buddhi, Smriti, and Samjna Jnana. The combined use of Shodhana and Shamana therapies, along with Medhya Rasayana drugs, was intended to address both the neurological and behavioral manifestations observed in ASD. External therapies, including Sarvanga Abhyanga, Nadi Sweda, and Shiropichu were selected due to their Vata-pacifying and calming effects on the nervous system. Chandanbala-Lakshadi Taila, known for its Snigdha, Sheeta, and Vataghna properties, is widely indicated in neurological disorders and helps nourish

Majja Dhatu, stabilize neuronal functions, and reduce hyperactivity, which is often impaired in individuals with autism. (9,10) Similarly, Dashamoola Kashaya



Fig. 1 Shiropichu

possesses Vatahara and Srotoshodhana properties that help regulate abnormal neurological activity and improve sleep patterns.



Fig. 2 Abhyanga



Fig. 3 Taila for Matra Basti

Mandukparni, Shankhapushpi, Yashtimadhu, Shatavari was administered to enhance cognitive stability and behavioural calmness. Brahmi and Shankhapushpi are well-recognized Medhya Rasayana drugs known to enhance neurotransmission, improve attention, and support memory functions.

Basti therapy was incorporated considering its classical indication in Unmada and other Vata dominant disorder. According to Charaka Samhita, Sneha basti is



Fig. 4 Administration of Matra Basti

regarded as one of the most effective therapies for disorders involving aggravated Vata Dosha. (12) In this case, Bala taila was initially used for Matra basti due to its Medhya balya properties. It helps pacify Vata and Kapha Doshas, nourish Sattva Guna, and support cognitive functions. Basti therapy also influences gut-brain interactions by modulating intestinal physiology and neuroimmune responses.

The use of Akkalkara Churna for Jivha pratisarana was selected due to its Medhya, Lekhana, and Vata-Kapha Shamaka properties described in classical texts such as Akkalakara is traditionally indicated in speech disorders and cognitive impairment, and modern studies also highlight its neuromodulatory effects.

Internal medications primarily consisted of Medhya Rasayana drugs, which play a crucial role in enhancing cognitive functions. Brahmi Ghrita were introduced orally to further enhance cognitive stability and learning ability (15).

Finally, Saraswatarishta was added as a classical Medhya formulation indicated in conditions involving Vak vikriti and unmade (17). It possesses Vak-Medha-Smriti Prasadana properties and helps stabilize cognitive and behavioral functions by pacifying Vata and Kapha Doshas.

Overall, the sequential combination of Panchakarma therapies and Medhya Rasayana formulations aimed to restore doshic balance, strengthen Manovaha Srotas, and support cognitive and behavioral improvement. The progressive reduction in ISAA scores and APSI scores observed in this case suggests the potential role of Ayurvedic interventions in improving behavioral symptoms and reducing caregiver stress in ASD

CONCLUSION

The current case demonstrates how Ayurvedic treatment can effectively manage a 4-year-old male patient's symptoms of moderate autism. A customized treatment plan was implemented via a comprehensive evaluation grounded in Ayurvedic principles, which mainly identified Vata dominance and Manovaha Srotas involvement. Without any major side effects, the use of Medhya Rasayana in conjunction with Panchakarma techniques and supportive therapies led to notable improvements in behavioral problems, emotional equilibrium, attention span, and social engagement. This instance highlights the value of customized treatment planning based on classical medicine and demonstrates the potential of Ayurvedic methods in enhancing the quality of life for people with autism spectrum disorder. Although this particular instance demonstrates encouraging outcomes with Ayurvedic treatment, more thorough clinical trials using standardized diagnostic techniques and objective outcome assessments are required to validate these findings. Establishing evidence-based guidelines may be aided by comparative studies between Ayurvedic procedures and mainstream medicines as well as integrative approaches. Furthermore, long-term follow-up studies are crucial for evaluating the sustainability of therapeutic benefits as well as the

effectiveness of treatment for neurodevelopmental disorders.

Patient perspective

The parents disclosed that before to treatment, their child had poor eye contact, frequent hyperactivity, sleep disturbances, and limited speech, all of which caused a great deal of stress and anxiety about his future. They gradually saw improvements after starting internal drugs and Ayurvedic panchakarma therapy. The child started to exhibit improved sleep habits, reduced hyperactivity, and improved eye contact. Additionally, they reported feeling less burdened and more optimistic when the stress of providing care subsided. The parents expressed their contentment with the treatment strategy, emphasizing its child-friendliness, comprehensive nature, and safety. They observed that Ayurvedic treatment improved the child's and the family's general quality of life in addition to reducing the symptoms.

Informed consent

Informed consent was obtained from the parents for documentation and publication of the case. The patient's identity has been kept confidential, and the family was assured that all information would be used solely for educational and research purposes.

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