

STAMMERING- AN AYURVEDA VIEW

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ABSTRACT:

Man acquires prestigious position in life because of his unlimited thoughts and ambitions. It is discriminative capacity and power expressing thoughts in the form of speech makes him to conquer all walks of life. Struggle between health and disease begins with the onset of life i.e. since childhood and main aim is to gain healthy childhood. Child is multifaceted entity of society. Stammering is a disorder of human communication prevails 1- 5% of children population. It is defined as disruption of fluency of verbal expression and is by spasmodic repetition and prolongation of vocal sounds by fear, anxiety and struggle to avoid speech errors. In current system of medicine Speech Therapy takes the upper hand in the management of Stuttering. There is no elaborate explanation regarding the speech disorder in Ayurvedic literature.

Key Words : Stammering, repetition, prolongation, speech therapy.

INTRODUCTION: Speech is the unique characteristic feature of the human being. Speech is the ability to convey thoughts, ideas, or other information by means of articulating sound into meaningful words. Fluent speech is essential for psychological development of the child and for proper convey of thoughts. It enables one person to convey knowledge to a roomful of other people. Any fluent problem in speech will create a disturbance in the emotional and social behavior of the children. One such fluency disorder of speech is stammering in children, which is the most trouble shooting problem in childhood age group and which can lead to the disability in the later ages.

The speech disorders can be classified under three main headings¹. These are fluency disorders, articulatory disorders and voice disorders. Fluency disorder means a disorder in which fluency is affected. Eg: stammering, cluttering.

Articulatory disorders- In some children only one or two sounds may be mispronounced whereas in others so many sounds may be mispronounced that the child's speech may be unintelligible.
Voice disorders- Voice problems include complete absence of voice (aphonia), hoarseness, harshness, breathiness, high/low pitched voice, etc. Children who scream and talk excessively are prone to voice problems.

STAMMERING: Stammering is a complex disorder composed of many levels factors because there is no single reason. In most cases the syndrome appears to arise from a combination of several factors that come together within a requisite time interval. Stammering can found in some early literature, where it is used interchangeably with Stuttering. Currently the term stuttering is used in the United States; Stammering is often used to mean essentially the same thing in Europe.

A comprehensive definition of stuttering must also take into account the effect of the experience on the speaker. Van Riper acknowledged that 'stuttering occurs when the forward flow of speech is interrupted by motorically disrupted sound, syllable, or word, or by the speaker's reactions². Characteristics of stammering are Repetition or syllables, words, Prolongations, Silent pauses, Hard contacts, Hesitations and Physical concomitants like Distracting sounds, Facial grimaces, Head movements, Movement of the extremities.

The assessment of Stammering is difficult in children when compare to that of adults. At the most basic level frequency, duration and tension³ are the three categories of behavior that may be used to determine the severity of stuttering.

Following parameters are used to assess stammering in young children:

1. Stuttering Severity instrument (SSI-3)
2. Modified Erickson Scale of Communication Attitudes (S-24)
3. Perceptions of Stuttering Inventory (PSI)
4. Locus of Control of Behavior (LCB)
5. Communicative Attitudes test-revised (CAT-R)
6. A-19 Scale for children
7. Stuttering Prediction Instrument for Young Children

TREATMENT OF STAMMERING:

The goal of Treatment is to achieve spontaneous fluency and modeling. The speech therapy is the well-known treatment modality done in stammering. The steps⁴ in stammering treatment are

1. Identification.
2. Desensitization.
3. Modification.
4. Stabilization.

Identification: is the phase in which the stutterer explores, analyzes and classifies the covert behaviors and covert experiences that characterize his particular kind of stuttering.

Desensitization: is the phase devoted to decreasing his speech anxieties and the other negative emotions connected with his disorder.

Modification: is the phase involving first the varying and then the unlearning of habitual avoidances and struggle responses, and also the learning, through counter conditioning, of a new fluent, less abnormal way of stuttering.

Stabilization: is the phase in which helping the stutterer to consolidate his gains, to create generalized sets that will make the new fluent form of stuttering automatic, and to develop proprioceptive monitoring of his normal speech.

Stuttering modification therapies focus on changing individual moments of stuttering to make them smoother, shorter, less tense and hard, and less penalizing. Stuttering modification approaches do not strive to make a stutterer fluent but rather, to stutter with control. Stuttering modification therapies tend to recognize the fear and avoidance that builds up surrounding the stuttering and consequently spend a great deal of time helping people who stutter to work through those emotions. The fluency shaping therapies focus on changing all speech of the stutterer, not just the moments of stuttering. These therapies have a more global approach because they teach the person to slow down and smooth out all of their words.

General Guidelines in the treatment of stammering:

- Help the child gain a sense of mastery and control, not only over

stuttering, but over the aspects of life as well.

- With fluency shaping and stuttering modification, help the child become appropriately open about stuttering. This reduces the tendency to avoid or withdraw from anticipated difficult speaking situations.
- Help the child to develop unique and natural responses.
- Help the child to build the self-esteem by developing areas in which he or she can excel.
- If a child is susceptible to stress and excitement, help the child to develop response to stress, such as slowing the rate of speech.

AYURVEDIC PERSPECTIVE:

Kashyapa has explained the parts of Vakindriya⁵. It is divided into two, one part works for Vachana and one part works for Grahana of Shabdha. It clearly indicates that the speech function is not mere sound production. It also includes sound perception. He also explained a child born deaf cannot learn the speech production. He will be Mooka. Because Shrotra acts as Vakmoola.

Acharya Kashyapa has mentioned the developmental mile stone for speech⁶. In Shareera Sthana while explaining the characters of persons, he has mentioned that in Kaliyuga Vachana will be developed by the first year of life for human beings.

Even though there is no mentioning of separate category of speech disorders in Ayurveda, we get the references in classics which tell about the fluency disorders, developmental speech problems, voice problems etc. The speech problems mentioned in the classics are Mooka, Minmina, Gadgada, diseases of

Swara like Swarabheda, Vak Graha. These conditions are coming under fluency problems, articulatory problems and voice problems. Also there are references regarding the lakshanas of Swara in other systemic disorders.

Acharya Kashyapa mentioned about the mookatva in the context of Samvardhana ghrita along with other developmental problems of children⁷. Acharya Charaka has mentioned about Prakruta and Vaikruta Swara in Indriyasthana, where he states that Gadgada is one of the Vaikruta Swara. While explaining the indications of certain formulations like Kalyanaka ghrita, Saraswatha arishta, Kalyana leha etc there is references of Speech Disorders.

The Nidana, Samprapti and Lakshana of the disease Gadgada is not elaborately mentioned in Ayurveda classics. Gadgada is mentioned in VataVyadhi Avarana Prakarana by Acharya Charaka⁸ and Acharya Sushruta⁹. Vriddha Vagbhata mentioned Gadgada is due to intake of Vata aggravating Aharavihara by garbhini¹⁰.

Word meaning: Word Gadgada refers to Aspashta Vak, Ashpashta Dhvani, Avyakta Dhvani, Avyakta Sphuta Sabdha and Vak Skhalana¹¹.

Nidana and Samprapti of Gadgada:

Specific nidana for Gadgada is not mentioned. As it is mentioned in Avarana prakarana the Nidana for Vata Vriddhi can be considered. Acharya Vagbhata stated that Vataja Ahara Vihara intake by Garbhini leads to vata vriddhi which in due course leads to the problems in the child like Jada, Badhira, mooka, Minmina, Gadgada, Khanja, Kubja, Vamana, Hena Anga, Adhika Anga and other Vata vikaras. Acharyas have

enumerated group of diseases under Janmabala Pravritta Vyadhis in which Pangu, Jatyandha, Badhira, Mooka, Minmina are included. Hence there is a scope to include Gadgada in this category as Sushruta has mentioned the word 'Prabhritayah'.

Acharya Charaka has explained excess Madhura rasa intake during pregnancy will lead to Mookatva in child¹². This denotes the speech pathology caused by Garbhini Ahara. Here Gadgada can be included as Mooktava word is used in broader meaning. Chakrapani while commenting on the Garbhopaghatakara bhavas said that these types of Ahara Vihara if taken by the woman before conception can lead to Artva Dushti and in man Shukra Dushti. Because of vitiation of Artava and Shukra, the disease can manifest in the child. These are called as Adibala Pravritta vyadhi.

In Prakruti formation of a person, it is mentioned Matura Ahara Vihara prakruti¹³. This indicates food and regimen of the pregnant woman has influence on Garbha. So the disease also can be caused by improper Ahara Vihara by mother which can bring the abnormality of Vata Dosha. Sushruta has given the explanation regarding the manifestation of Speech Disorders as Vata gets Avarana by Kapha in Shabdavaha Dhamani and produces Mooka, Minmina and Gadgada⁹.

Charaka said in avarana pakarana that Gadgada is the symptom produced by the Avarana of Samana Vata by Prana Vata⁸. Also mentioned Swara and Vak Sanga occur because of Avarana of Udana Vata by Kapha. Charaka Acharya has stated the Abhigata to Shiro Marma, one among three marma, can cause the

symptom of Gadgada which denotes the neurological cause of the disease.

There is no direct reference of particular Ahara which can lead into Gadgada. The causative factors which can aggravate Vata and Kapha can be taken as Nidana for Gadgada¹⁴. As there is dominance of Kapha in childhood period these causative factors can influence to produce Gadgada. There is no reference of Manasika karanas leading to Gadgada, but the Vata can aggravate by Kama, Shoka, Bhaya these factors may cause manifestation of Gadgada.

Lakshana: features of the Gadgada are as follows

1. Lupta pada vyanjanadi⁹
2. Avyakta Vak⁹
3. Aspashtha vachana¹⁵
4. Gardhabavat Swara¹⁵
5. Sphuta Vak¹⁶
6. Svalpa Asambaddha Vak¹⁷
7. Gharghara Shabdha

The characteristic features will be absence of syllable, consonants, word, difficult to understand the speech. Aspashtha vachana may be in the form of repetition, gap between words or in words, wrong pronunciation.

In Ayurvedic classics the treatment procedures for Gadgada and other speech problems are not elaborately explained. Speech problem is one of the indications in some of the combinations mentioned by Acharyas in the treatment of Unmada, Apasmara etc disorders.

Following line of treatment can be followed for Gadgada:

Common Vata Vyadhi Treatments: Chatu Sneha ie, Sarpi, Taila, Vasa and majja used as Pana, Abhyanga, Basti. Snigdha Sweda can be adopted. Person should be in Nivata Pradesha and adopt Pravarana ie, covering with Blankets. Ksheera

Bhojana can be indicated. Madhura, Amla, Lavana are the Rasas to be taken in Vata vyadhi. Brihmana line of treatment should be adopted in Vata Vyadhi.

Treatment for Udana Vata: Acharya Charaka has stated the common line of treatment of diseases which involves the Udana Vata. He has indicated Urdhva Bhaga Chikitsa. Gangadhara said avarana of udana vata should be treated with Urdvabheshaja¹⁸. Chakrapani opined pakriti sthapana of vata has to be done by Vamanadi kriya in the context of uadanavata chikitsa¹⁹.

Treatment of Avarana vata: Common treatment principle for Avarana is mentioned by Acharya Charaka. He states that after analyzing the disease condition treatment should be done by Anabhishtandi, Snigdha drugs and by Shodhana of Srotas²⁰.

The Kapha Pitta Avirodhi and Vata Anulomana should be the main treatment principle in any Avarana of Vata. According to Bala Madhura Yapani Basti, Madhura Anuvasana basti, Mrudu or Sramsana type of Virechana can be adopted¹⁹. Rasayanas like Shilajitu, Guggulu etc are indicated in Avarana after Samyak Shodhana²⁰. Treatment of Kaphavrita Vata: Acharya Charaka has stated that Kaphaghna with Vata Avirodhi type of treatment should be adopted in Kaphavrita Vata²⁰.

Treatment of Prannavrita Samana: Charaka has indicated Sneha Chatushprayoga and Yapani Basti in Prannavrita Samana condition. Sneha chatushprayoga refers to Pana, Abhyanga, Anuvasana and Nasya²¹.

Nasya: Acharya Charaka has indicated Nasya in speech pathologies like Gadgada. Swarabheda, Vakgraha. Type

of Nasya is according to the vitiation of Dosha involved and severity²².

Siravyadha: Sushruta has indicated siravyadha in Jihvagata Vaydhis. The Siravyadha has to be done in Adhi Jihva Pradesha²³.

Gandusha: Acharya Chakrapanidatta in his book Chakradatta has mentioned Jihva Dhamanigata Vata related disorders should be treated by Gandusha specially Sneha Gandusha²⁴.

Treatment of Shiro Abhigata: Acharya Charaka has explained the treatment modalities for Abhigata to the Shiro Marma. He has mentioned Abhyanga, Sweda, Upanaha, Sneha pana, Nasya Karma, Avapeeda nasya, Dhumapana etc, for the treatment of Abhigata to Shiras²⁵.

Prayatna: Prayatna is one among six Adhyatma Gunas which is the stimulating quality for the person to get corrected. When person is doing mistake in speech, there should be motivation in him, that he should be get corrected. This motivation is necessary to get initiation to adopt the advices and adopt the measures.

Abhyasa: Abhyasa is one of the Paradi Gunas mentioned, where person can learn the correct things by practicing again and again. Here also the wrong methods in Speech can be corrected by proper practice of correct method. Continuous practicing will result in correction of defects of speech.

Nidana Parivarjana: The Vatakara Ahara should not be taken in excess by Stree and Purusha to avoid the Artava dushti and Sukra dushti. Proper regimens of Rutu Kala, Rajasvala charya should be followed for good progeny.

Garbhini stree should not indulge in Ahara and Vihara which increases Vata. Garbhini should avoid excess Madhura rasa intake. Garbha Upaghatakara Bhavas

should be avoided. Douhrida apachara should be avoided.

Pathya and Apathya: In Kaphavrita vata Yavanna, Jangala Mamsa, Sweda, Niruha, Teekshna Vamana Virechana, Purana Sarpi and Taila are Pathya.

Several Yogas indicated for speech disorders are Kalyanakavaleha, Saraswatha choorna, Brihat Saraswatha choorna, Saraswatha ghrita, Saraswatha arishta, Kalyanaka ghrita, Brahmi ghrita, Amrita Prashavaleha, Kushmanda Rasayana, Chyavanaprashavaleha, Kumara Kalyana Rasa, Rasnadi kwatha, Ashwagandha Taila, Vachadi yoga etc.

DISCUSSION:The Gadgada word itself indicates the disease in which fluency of speech is not present. It denotes the Avyakta vak or shabdha. Stuttering is the dysfluency type of speech pathology where fluent speech is interrupted by repetition of syllable or word, pause, prolongation, hard contacts and hesitation. There are normal non fluent speech is observed in children during the speech developmental period and child is unaware of the problem. The child displays no special effort or tension during speaking. The primary behaviors are differentiated from secondary behaviors that gradually develop around the core of the small breaks and pauses in speech. The initial breaks in the timing of speech sometimes indicate the incipient stages of stuttering in young children. These breaks take the form of repetitions and prolongations. As awareness increases and struggle behavior develops, there may be blockages or disruptions in air flow, phonation, or even respiration.

The disease Gadgada is caused because of Avarana of Vata by Kapha in shabdhavaha dhamani. The causative factors like Kapha and Vata vitiating

nidana, Shukra and Artava dushti, Garbhini Vataja Nidana, Madhura rasa excess intake by Garbhini, Abhighata to Shiras, Adrishta are contributing their role in manifestation of Gadgada. Even the Manasika karanas like Shoka, Bhaya, Udvega can influence speech in person, because proper functioning of Manas is essential for Indriya to work physiologically. Causative factor of stuttering is mentioned as multifactorial like Genetis influence, familial inheritance learned behavior, psychological causes, CNS injury, developmental and unknown cause.

Acharya Charaka has stated that only two causes such as Dhatukshaya and Avarana are responsible for Vatavyadhi and the Samsarga of other Doshas has to be seen. This principle should be applied in case of Gadgada for the betterment of treatment. Gadgada can be caused due to the Dhatukshaya as well as Avarana. The Dhatukshayaja vatavidhi is caused by Garbhini vataja ahara vihara, Garbhopaghatakara nidana. These lead into garbha shoshana leading to Dhatukshayaja vatavridhi. Avarana of Vata occurs because of Nidana which can vitiate Vata as well as Kapha explained as Kaphavrita vata in classics. The Abhighata to Shiras as explained by Charaka is Achaya poorvaka prakopa of Vata causing Gadgada.

Modern literature explains Stuttering as it can be continued as secondary from primary disfluency during developmental age of child generally by 6 or 7 years of age. This type is called as Developmental Stuttering. CNS injury causes Neurological Stuttering and Psychological disturbances can lead into Psychogenic Stuttering. Stuttering can

also be the learned behavior from other stutterer.

Gadgada has to be treated by considering causative factors and Dosha involved. Yuktivyapashraya and Satvavajaya treatments play equal role in treating Gadgada. According to Dosha involvement the various Urdhvajatrugata treatment procedures like Nasya, Gandusha etc can be adopted. Nasya of teekshna dravyas and Sneha Madhura dravyas are beneficial in Avaranajanya and Dhatukshayajanya Gadgada respectively. The Vatavyadhi treatment like use of Sneha dravyas is also beneficial. Kaphaghna vata avirodhi chikitsa can be adopted as mentioned in classics. Katu rasa, Ushna veerya, Katu vipaka dravyas are helpful in Kapha and Vata involvement. Rasayana, Swarya and Medhya are also equally beneficial in the treatment of Gadgada.

CONCLUSION: During the developmental age of the child there may be physiological or primary disfluency and is unaware of this disfluency. This is continued as secondary fluency problem in the form of interruptions or repetitions and can continue as Developmental Stuttering. Speech pathologies are grouped into three categories- Dysfluency, Articulatory problems and Voice disorders. Stuttering is the dysfluency type of speech pathology which is characterized by the repetition of syllable or word, block, prolongation, hesitations, hard contacts and may be associated with physical concomitants.

Ayurveda classifies speech problems into three categories Mooka, Minmina and Gadgada. These are considered as the variety of Vatavyadhis. The Avarana pathology is especially mentioned for Gadgada where Kapha

does the avarana for Vata in Shabdhaba Dhamani.

The Gadgada and Stammering can be correlated by observing the causative factors and symptomatology. Gadgada is characterized by Lupta Pada or Vyanjana etc. The word 'adi' i.e., etc has given wide range to understand which can be fulfilled by the definition of Stuttering. The etiopathogenesis of the condition was not explained in detail in classics but it is clear that Gadgada is of multi factorial in origin by observing scattered references.

REFERENCES:

1. Charles Van Riper. Speech Correction, 9th ed., New York: Allyn & Bacon Publication; 1996, Page no 109.
2. Walter Manning. Clinical Decision Making in Fluency Disorders, 2nd ed. New York: Singular Thomason Publication; 1998, Page no 38-45.
3. Walter Manning. Clinical Decision Making in Fluency Disorders, 2nd ed. New York: Singular Thomason Publication; 1998, Page no 147.
4. Charles Van Riper. The Treatment of Stuttering, New York: Practice Hall publication; 1973, Page no 205.
5. Vriddha Jeevaka. Kashyapa Samhita, Vidyotini Hindi commentary by Sri Satyapala Bhashagacharya, Chikitsa Sthana, Phakka chikitsaadhyaya, Varanasi: Choukanmbha Sanskrit Samsthan; 2004, Page no 139.
6. Vriddha Jeevaka. Kashyapa Samhita, Vidyotini Hindi commentary by Sri Satyapala Bhashagacharya, Shareera Sthana, Varanasi: Choukanmbha Sanskrit Samsthan; 2004, Page no 66.
7. Vriddha Jeevaka. Kashyapa Samhita, Vidyotini Hindi commentary by Sri Satyapala Bhashagacharya, Sutra Sthana, Lehyadhyaya, Varanasi:

- Choukanmbha Sanskrit Samsthan; 2004, Page no 6.
8. Agnivesha. Charaka Samhita- Ayurveda deepika Chakrapani commentary, edited by Yadavji Trikamji Acharya, chikitsa sthana, vatavyadhichikitsitam, Varanasi: Chaukambha Surbharati Prakshan; 2005, Page No 621.
9. Sushruta. Sushruta Samhita- Nibandha Sangraha Dalhana commentary, edited by Yadavji Trikamji Acharya, nidana sthana, vatavyadhi nidanopakrama, Varanasi: Chaukambha Surbharati Prakashan, 2003, Page no 269.
10. Vriddha Vagbhata. Ashtanga Sangraha, Edited by Prof K R Srikanta Murty, vol 2, shareera sthana, garbhavyapat vidhi, Varanasi: Choukambha orientalia, 2012, Page no 28.
11. Raja Radhakantha. Shabdhakalpadruma- varadaprasadvasu, Shri Haricharanavas, 3rd ed. New Delhi: Naga Publishers; 2006, Page no 300.
12. Agnivesha. Charaka Samhita- Ayurveda deepika Chakrapani commentary, edited by Yadavji Trikamji Acharya, shareera sthana, jatisutreeya, Varanasi: Chaukambha Surbharati Prakshan; 2005, Page No 343-4.
13. Agnivesha. Charaka Samhita- Ayurveda deepika Chakrapani commentary, edited by Yadavji Trikamji Acharya, vimana sthana, rogabhishagjiteeyam, Varanasi: Chaukambha Surbharati Prakshan; 2005, Page No 277.
14. Sushruta. Sushruta Samhita- Nibandha Sangraha Dalhana commentary, edited by Yadavji Trikamji Acharya, sutra sthana, vrana prashna adhyaya, Varanasi: Chaukambha Surbharati Prakashan, 2003, Page no 103-4.
15. Sushruta. Sushruta Samhita- Nibandha Sangraha Dalhana commentary, edited by Yadavji Trikamji Acharya, kalpa sthana, sthavara visha vijnaneeya, Varanasi: Chaukambha Surbharati Prakashan, 2003, Page no 565.
16. Vagbhata. Ashtanha Hrudaya, Sarvangasundara of Arunadatta, edited by Pt H S Sastri Paradakara, uttara sthana, visha pratishedha adhyaya, Varanasi: Choukambha Surbharati Prakashan; 2002, Page no 904-5.
17. Vagbhata. Ashtanha Hrudaya, Sarvangasundara of Arunadatta, edited by Pt H S Sastri Paradakara, nidana sthana, madatyaya nidana, Varanasi: Choukambha Surbharati Prakashan; 2002, Page no 488.
18. Agnivesha. Charaka Samhita- Jalpapakalpataru commentary by Shri Gangadhara, edited by Shri narendranath Sengupta, Vol 5, Chikitsa sthana, Vatavyadhichikitsitam, Varanasi: Chaukambha publications; 2009, Page No 3424.
19. Agnivesha. Charaka Samhita- Ayurveda deepika Chakrapani commentary, edited by Yadavji Trikamji Acharya, Chikitsa sthana, Vatavyadhichikitsitam, Varanasi: Chaukambha Surbharati Prakshan; 2005, Page No 626
20. Agnivesha. Charaka Samhita- Ayurveda deepika Chakrapani commentary, edited by Yadavji Trikamji Acharya, Chikitsa sthana, Vatavyadhichikitsitam, Varanasi: Chaukambha Surbharati Prakshan; 2005, Page No 627
21. Agnivesha. Charaka Samhita- Ayurveda deepika Chakrapani commentary, edited by Yadavji

- Trikamji Acharya, Chikitsa sthana, Vatavyadhichikitsitam, Varanasi: Chaukambha Surbharati Prakshan; 2005, Page No 625.
22. Agnivesha. Charaka Samhita- Ayurveda deepika Chakrapani commentary, edited by Yadavji Trikamji Acharya, siddhi sthana, pancha karmeeya siddhi, Varanasi: Chaukambha Surbharati Prakshan; 2005, Page No 690.
23. Sushruta. Sushruta Samhita- Nibandha Sangraha Dalhana commentary, edited by Yadavji Trikamji Acharya, shareera sthana, siravyadha vidhi adhyaya, Varanasi: Chaukambha Surbharati Prakashan, 2003, Page no 381.
24. Chakrapani. Chakradatta, Hindi commentary by Dr. Indradev Tripathy, edited by Prof Ramanath Dwivedy, Varanasi: Chukambha Sanskrit Sansthan; 2005, Page no 134.
25. Agnivesha. Charaka Samhita- Ayurveda deepika Chakrapani commentary, edited by Yadavji Trikamji Acharya, siddhi sthana, trimarmeeya siddhi, Varanasi: Chaukambha Surbharati Prakshan; 2005, Page No 717-8.

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