

# Conceptual Study of Vak Vikruti (Speech Impairment)

Dr. Madhuri Rao<sup>1</sup>, Dr. Vihar Bidwai<sup>2</sup>, Dr. Ramchandra Rathod<sup>3</sup>

<sup>1</sup>Principal HOD, Professor, Department of Kayachikitsa, GMS Ayurved Mahavidyalaya Pusad, India

<sup>2</sup>Vice Principal, HOD and Associate Professor, Department of Shalyatantra, GMS Ayurved Mahavidyalaya Pusad, India

<sup>3</sup>HOD and Associate Professor, Department of Shalyatantra, GMS Ayurved Mahavidyalaya Pusad, India

**Abstract:** *Today's, Speech impairment is one of the common impairments presenting in early childhood so here in this study, we are trying to search a way by using Ayurvedic therapies.*

**Keywords:** Speech impairment, speech disability, Ayurvedic therapies

## 1. Introduction

Speech impairment is one of the common impairments presenting in early childhood [1]. Some children with speech difficulties may have a severe communication problem and the problem with educational status, including reading, and writing [2]. Speech impairment can make the children difficult to communicate with other people and often affects a child's quality of life. The National Sample Survey Organization (NSSO), Government of India, reported 5.06% speech disability in India. It showed that speech disability is 5.5% in an urban area and 4.90% in a rural area. The prevalence of speech disability in age group 0-4 was 5.8% in males while 5.59% in females. In the age group 5-9, it was 6.04% in males and 3.24% in females [3]. In the age group 10-14, it was 2.33% in males and 2.28% in females. The concept of child development in Ayurveda is scattered throughout the body of classical Ayurvedic literature. Ayurveda was organized into its compact system of health and considered a branch of Atharva Veda. Kaumarabhritya, one of the most appreciated branches of Ayurveda, Kashyapa has explained the parts of Vakindriyas [4]. It is divided into two, one part works for Vachana and one part works for Grahana of Shabdha [5]. Acharya Kashyapa has mentioned the developmental milestone for speech [6]. The speech problems mentioned in the classics are Mooka, Minmina, Gadgada, diseases of Swara like Swarabheda, VakGraha. Acharya Kashyapa mentioned the mookatva in the context of Samvardhana ghrita along with other developmental problems of children [7]. Gadgada is mentioned in Vatavyadhi Avarana Prakarana by Acharya Charaka [8] and Acharya Sushruta [9].

## 2. Materials and Method

A literature study for Vakvikruti and Speech impairment is done referring to both Ayurvedic and Modern medicine books.

### Modern Perspective: Speech Impairment

**Definition:** The Individuals with Disabilities Education Act, or IDEA, defines the term "Speech or language impairment" as follows:

Speech or language impairment means a communication disorder, such as stuttering, impaired articulation, language impairment, or a voice impairment, that adversely affects a child's educational performance.

### Causative factors of Speech Impairment :

#### 1) Neurological Cause

- Delayed language milestone
- Brain injury
- Cerebral palsy
- Neurological disorders
- Mental retardation

#### 2) Physical Impairment

#### 3) Behavioral or Social cause

- Autism
- Child abuse

#### 4) Other cause

- Hearing loss
- Drug abuse
- Vocal loading
- Genetic Factor
- Medical conditions as a risk factor

### Classification of Speech Impairment

**Articulation Disorder:** Articulation disorders are characterized by substitutions, omissions, additions, or distortions of speech sounds that interfere with intelligibility.

**Fluency Disorder:** Fluency disorder (stuttering) is an interruption in the flow of speaking characterized by a typical rate, rhythm, and repetitions in sounds, syllables, words, and phrases. Excessive tension, struggle behavior, and secondary mannerisms may be present.

**Voice Disorder:** Voice disorder pertains to abnormal production and/or absences of vocal quality, pitch, loudness, resonance, and/or duration, which is inappropriate for the child's age and sex.

**Management**

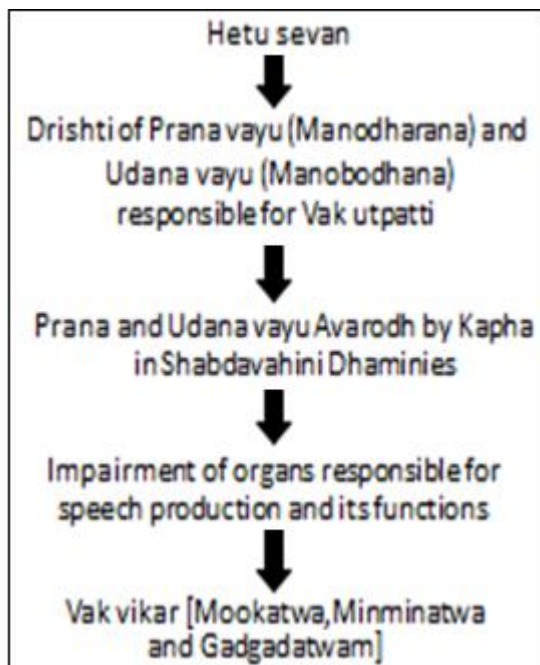
**Articulation Disorder:** The hallmark of articulation therapy lies in its sequencing of activities for Sensory perceptual training which concentrates on identifying the standard sound and discriminating it from its error through scanning and comparing Varying, and correcting the various productions of the sound until it is produced correctly, Strengthening and stabilizing the correct production; and finally transferring the new speech skill to everyday communication situations.

**Fluency disorder (stuttering):** Psychotherapy, Fluency Shaping Therapy, The modification of Stuttering Approach, Electronic Fluency Device, Medications, Diaphragmatic Breathing, Support, and Awareness.

**Ayurvedic Perspective:** VakVikriti i.e. Mookatvam (muteness), Minminatvam (unclear and speech of nasal origin), and Gadgadatvam (unintelligible speech) are explained in eighty types of Vatavitiated disorders. These are also mentioned as features of disorders due to obstruction of channels. According to Susruta, Vata with Kapha obstructs the Shabdavahini Dhaminies and results in Mookatwa, Minminatwa, and Gadgadatvam.

**Some causative factors scattered in the Ayurvedic text are as follows:**

Hearing loss, Obstruction of samanavayu by Pranavayu, Asamyak Dhumpantpr yoga, Breast feeding of vatpittavitiated mother, Milk vitiated with Tridosha, Milk vitiated with lavanarasa, Mother with multiple pregnancies, Head injuries, Injury to Nila and manyamarma, Childillness like Rajayakshama, Phakka, Graha Badha Samprapti.

**Samprapti Ghatak**

**Dosha:** Vata (Pranavayu and Udanavayu)

**Dushya:** Shabdavahini Dhamani

**Adhistan:** Head, Tongue, nose, throat, lips, and organs of speech production

**Strotasa:** Manovahastrotas, four swaravahistrotas.

**Lakshana: Mookatvam: Absence of speech, muteness. Minminatvam:** Speech with the nasal origin

**Gadgadvakatvam:** Unclear speech, difficult to understand by the listener, Secondary activities while Speaking

**Vyadhi Vyavached:** Speech disorders should be differentiated from other disorders in which speech is involved.

**Mookatvam:**

Muteness or loss of speech is mentioned in all classical texts. It is explained that injury to Neela and many amarmas produces muteness or loss of speech. This is called muteness or dumbness, where there is the absence of power to speak completely.

**Minminatvam:**

Phonemes are getting correct pronunciation by movements of lips, tongue, and palate. Any abnormality of this system produces a change in intonation causing hypo or hypernasality.

**Gadgadvakatvam:** In this, there is stoppage and disruption in the fluency of speech. The stoppage may take the form of repetition of sound, syllables, and words. This may also lead to prolongation and silent blockage during speaking. The person with these pathologies is having difficulty in controlling their speech flow and variability in the fluency of speech.

**Management:**

Nidan Parivarjan, Management of Vakvikriti with the help of Specific classical references, Management of Vatdrishti with the help of Ayurvedic medicines and Procedure.

**Ekaldravya Yojna: Charakokta Kanthya Varga Yojna (Ch.Su.4/9):**

Following tendravys are included in Kanthya Varga by Acharya Charak.

Sativa	Ikshumool	Madhuka	Pippali	Draksha
Vidari	Kaidarya	Hansapadi [Brahmi]	Brihati	Kantakari

**Aushadhikalp Yojna:** Kalyanleh, Samvardhana Ghrita, Saraswatghrita, Brahmi Ghrita, Vachadichurna, Saraswathurna.

**Panchakarm and allied interventions:** Snehan, Swedan, Nasya, Basti, Shirodhara, Gandush, Kaval

**Yogickriya:** Pranavupasana, Ujjaee, Breathing exercise (Purak-kumbhak-rechak), Bhastika Sheetali Kumbhak, Kakee pranayama.

**Kavipranayama:** Bhramaripranayam and Dhwanayatmakpranayama, Jalandharbandh, Khechari Mudra,

Shankha Mudra, Dhyanoover Anahat Chakra and Vishuddha Chakra.

**Aasan:**Matsyasana (Fish Pose), Bhujangasana (Bow Pose), Ushtrasana (Camel Pose) Ardh Chandrasana (Crescent or Half Moon Pose) Simhasana (Lion Pose), Nauka Sanchalanasana (Rowing).

### 3. Discussion

Speech impairment is one of the burning problems in childhood. Ayurvedic classics explained the concept of Mooka, Minmina, and Gadgadatvam, which points to pathological aspects of speech disorders. Speech impairment is classified into three types i.e. Articulation disorder, Fluency disorder, Voice disorder. Speech disorder can make a child physically, Psychologically, emotionally & socially handicapped. The study aimed to study the Vak Vikruti (Speech Impairment) from Ayurvedic and Modern texts.

The references from Vedas, Samhitas, commentaries with the present era texts, internet data having modern concepts regarding Speech impairment were collected in the present study. Vak Vikriti i.e. Mookatvam (muteness), Minminatvam (unclear and speech of nasal origin), and Gadgadatvam (unintelligible speech) are explained in eighty types of Vata vitiated disorders. These are also mentioned as features of disorders due to obstruction of channels. According to Susruta, Vata with Kapha obstructs the Shabdavahini Dhaminies and results in Mookatwa, Minminatwa, and Gadgadatvam.

In Gadgadatvam there is stoppage and disruption in the fluency of speech. The stoppage may take the form of repetition of sound, syllables, and words. Some of the causes of Vakvikruti are Hearing loss, Obstruction of samanavayu by pranavayu, Asamyak Dhumpnanprayog, Milk vitiated with Tridosha, and lavan rasa, Head injuries, Child illness like Rajayakshama, Phakka, and Graha Badha. In Modern science causes of Speech, Impairment is broadly described as Neurological cause, Physical impairment, Behavioral or Social cause and Other cause that includes drug abuse, hearing loss etc. In Ayurveda management of Vakvikruti includes Aushadhikalp Yojna, Panchakarma and allied interventions, Yogickriya. Whereas in Modern Science its treatment involves Psychotherapy, Fluency Shaping Therapy, The modification of Stuttering Approach, Electronic Fluency Device, Medications, Diaphragmatic Breathing and Support, and Awareness.

### References

- [1] Kent RD, Vorperian HK. Speech impairment in Down syndrome: A review. *Journal of Speech, Language and Hearing Research (Online)*. 2013 Feb 1; 56(1):178.
- [2] Pascoe M, Maphalala Z, Ebrahim A, Hime D, Mdladla B, Mohamed N, Skinner M. Children with Speech Difficulties: A survey of clinical practice in the Western Cape. *South African Journal of Communication Disorders*. 2010 Dec 10;57(1):66.
- [3] Beitchman JH, Nair R, Clegg M, Patel PG. Prevalence of speech and language disorders in 5-year-old kindergarten children in the Ottawa-Carleton region.

*Journal of Speech and Hearing Disorders*. 1986 May;51(2):98-110.

- [4] Basumatary K, Devi LV. A Study of Kaumarabhritya With Special Reference To CharakSamhita. *International Journal of Research in AYUSH and Pharmaceutical Sciences*. 2017:52-62.
- [5] VruddhaJeevaka. *KashyapaSamhita, Vidyotini Hindi commentary by Sri SatyapalaBhishagacharya, ChikitsaSthana, Phakkachikitsaadyaya, Varanasi: Choukanmbha Sanskrit Samsthan; 2004, Page no 139.*
- [6] VruddhaJeevaka. *KashyapaSamhita, Vidyotini Hindi commentary by SriSatyapalaBhishagacharya, ShareeraSthana, Varanasi: Choukanmbha Sanskrit Samsthan; 2004, Page no. 66.*
- [7] Vruddha Jeevaka, *Kashyapa Samhita, Vidyotini, Hindi commentary by Sri Satyapala Bhishagacharya, Sutra Sthana, Lehyadhyaya, Varanasi: Choukanmbha Sanskrit Samsthan; 2004, Page no 6.*
- [8] Agnivesha. *CharakaSamhita-Ayurveda deepika Chakrapani commentary, edited by Yadavji Trikamji Acharya, chikitsa sthana, vatavyadhichikitsitam, Varanasi: Chaukambha Surbharati Prakshan; 2005, Page No 621.*
- [9] Sushruta. *SushrutaSamhita-Nibandha Sangraha Dalhana commentary, edited by Yadavji Triakamji Acharya, nidanasthana, vatavyadhinidanopakrama, Varanasi: Chaukambha Surbharati Prakashan, 2003, Page no 269.*