




Management of “Wernick’s Aphasia” through Ayurveda- A Case Study.

Liya Elias¹ , Midun venu², P. K. V. Anand³, Rahul H⁴

1. House Surgeons, Vaidyaratnam Ayurveda College, Ollur, Thrissur
2. House Surgeons, Vaidyaratnam Ayurveda College, Ollur, Thrissur.
3. HOD & Professor, Department of Panchakarma, Vaidyaratnam Ayurveda College, Thrissur.
4. Assistant Professor, Department of Panchakarma, Vaidyaratnam Ayurveda college, Thrissur.

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Corresponding author-

Liya Elias, House Surgeons, Vaidyaratnam Ayurveda College, Thrissur.

Email: -liyaelias.14@gmail.com

ABSTRACT:

Aphasia is a language disorder caused by damage in a specific area of the brain that controls language expression and comprehension. It is most commonly seen in individuals post-stroke. Roughly 25%–50% of all strokes result in aphasia and 15 % of individuals under the age of 65 years experience aphasia after their first ischemic stroke. Treatments such as speech therapy can often help recover some speech and language functions over time, but many people continue to have problems in communicating. The signs and symptoms of Aphasia may be correlated with diseases such as *Jihwasthamba* and *Ardita* in Ayurveda. According to Acharya Yogaratnakara, the same treatment principles explained in *Ardita Chikitsa* have to be followed in *Jihwasthamba*. The article deals with a diagnosed case of Wernicke's Aphasia and its management through Ayurveda. The description of this case aims to further the understanding of the benefits that this type of medicine may provide to poststroke patients living with aphasia. Here the line of treatment was not completely based on the classical *Ardita Chikita*, prime importance was given to the condition Aphasia. Assessments were taken before treatment and after treatment. Marked relief was noted in symptoms like aphasia, higher mental function, and memory. The recovery was promising and worth documenting.

Keywords: Wernick’s aphasia, *Ardita*, *Jihwastambha*

INTRODUCTION

Aphasia is the loss or impairment of the production or comprehension of spoken or written language because of an acquired lesion of the brain¹. It can be so severe as to make communication with the patient almost impossible, or it can be very mild. Aphasia is mainly classified regarding the fluency of speech, comprehension, repetition as motor/ Broca's, sensory / Wernicke's or total/global. **Wernicke’s aphasia** also known as “fluent aphasia” or “receptive aphasia,” the ability to grasp the meaning of spoken words is chiefly impaired, while the ease of producing connected speech is not much affected. Here the

article deals with a diagnosed case of Wernick’s aphasia and its relative management as per ayurveda classics. Aphasia can be correlated with diseases such as *Jihwastambha*^{2,3} and *Ardita*⁴ in Ayurveda. The *Jihwastambha* is the disorder brought about by aggravated *Kapha* which encircles the channels of tongue (*Vagvahini* sequence), produces dysfunction of motor activities (like speech defect, aphasia, Dysarthria, Dysphonia etc) and difficulty in mastication, drinking, deglutition etc.



According to Acharya Yogaratnakara⁵, *Jihwastambha chikitsa* can follow the same principles and treatment of *Ardita*, which includes *Nasya*, *Murdhnitaila* etc. Acharya Charaka advocates *Navana*, *Shiro Abhyanga*, *Upanaha*, *Sirovasti*, *Utharabhaktika* *Gritapana* for the management of *Ardita*. *Jihwastambha* may or may not be a presenting complaint in *Ardhita*.

MATERIALS AND METHODS

Case Study:

A 50 year old right handed male patient came to our OPD with complaints of loss of memory, difficulty to name objects, and difficulty in vision, post CVA since 5 months. He has been a k/c/o DM, HTN and DL for 6 years and is under control with medication. The patient had severe head injury after an RTA, post which he started to experience slight memory loss. Gradually the patient became more aggressive in nature and also developed difficulty in vision. Later he also found difficulty to name objects and recall things, person and place. He consulted a physician and was advised to take a CT scan which showed acute infarct involving left temporo parietal lobe and parieto-occipital watershed zone- Left MCA territory and no areas of haemorrhage were present.M2 and M3 segment of left MCA artery is attenuated, left transverse sigmoid sinus are reduced in caliber. Patient was under medication for the same and has undergone speech therapy which only had a very minimal response. On admission patient was described as not oriented to name, place and time. He had fluent speech with not preserved comprehension and no repetition associated with mild dysphonia, dysarthria and difficulty in vision. This was presented as the main complaint and no other symptoms of post stroke were revealed on preliminary screening.

Personal history:

Bowel- once/day
 Appetite- normal
 Micturition- 5-6 / day, 2-3/night
 Sleep- sound
 Diet- mixed
 Exercise- nil
 Addictions- alcoholic

Dasavidha Pareeksha:

Table1 denoting *Dasavidha Pareeksha*

Treatment history:

1. Tab. Aspirin 150 mg 0-1-0
2. Tab. Atorvastatin 20 mg 0-0-1
3. Tab. Levetiracetam 500 mg 1-0-1
4. Tab. BCT 1-0-0

CNS Examination:

I. Speech

A. Aphasia: affected comprehension, fluent effortless speech, no repetition score: 4/5; dyslexia-absent; dysgraphia- absent.

B. Dysphonia: absent

C. Dysarthria: absent

II. Higher mental functions

Appearance and behaviour : normal

Attention - 4/5

Orientation -1/5

Registration -1/3

Attention and calculation - 1/5

Recall - 1/3

Language - 5/9

Total score - 13/30

Memory: Immediate- impaired, short term- impaired, long term- impaired

Test administered: Western Aphasia battery ⁽⁶⁾

Western Aphasia Battery (WAB) is an instrument for assessing the language function of adults with suspected neurological disorders as a result of a stroke, head injury, or dementia. It was designed to provide a means of evaluating the major clinical aspects of language function: content, fluency, auditory comprehension, repetition and naming plus reading, writing and calculation. In addition to the nonverbal skills of drawing, block design and praxis are also evaluated. The aphasia quotient (AQ) is the summary score that indicates overall severity of language impairment. Table 2. Western aphasia battery

III. Gait- Normal

IV. Cranial nerves:

Olfactory-NAD

Optic - Visual acuity- Right	Left
6/36.	6/18

Visual field-

i)Confrontation test - Right homonymous hemianopia

Colour vision- intact

IOP	:	right		left
		29.2 mm hg		29.2 mm hg

Oculomotor, Trochlear, Abducens -intact

Trigeminal-

a) Clenching- NAD

b) Opening of Jaw- NAD

c) Side to side movement of jaw- NAD

d) Jaw Jerk- NAD

e) Corneal reflex- NAD

Facial-

- a) Nasolabial fold- not obliterated
 - b) Angle of mouth- maintained on both sides.
 - c) Wrinkles of forehead- not clear
 - d) Closing eyes against resistance- NAD
 - e) Showing teeth- present
 - f) Blow out cheeks-NAD
 - g) Sensory- taste
 - h) Glabellar tap- intact
- Vestibulocochlear, Glossopharyngeal, Vagus, Accessory,
Hypoglossal- NAD

V. Sensory system

- Vibration - NAD
Joint position sense - NAD
Light -NAD
Pin prick -NAD
Temperature -NAD

VI. Motor system

Table 3. Motor system examination

VII. Coordination

All tests were possible.

VIII. Investigation

CT brain on 13-9-2022

Subacute infarct noted in the left parieto-occipital and temporal lobes. Mild midline shift towards the right side measuring 1.5mm. No evidence of intracranial haemorrhage.

CT brain on 9-12-2022

Chronic ischaemic changes noted in the left parietal and temporal lobes. No evidence of intracranial haemorrhage.

Intervention:

Internal:

1. *Dhanadanayanadi Kashayam* - 15 ml *kashayam* + 45 ml lukewarm water; 6 AM, 6PM ; before food
2. Tab *Ekanga Veera Rasa* - 2-0-2 with *kashayam*
3. *Pathyashadangam kashayam* -15 ml *kashayam* +45 ml lukewarm water; 10AM, 8PM, before food.
4. DA drops- 2 drops at 9AM, 11AM, 1PM, 3PM, 5PM.

External:

1. *Udwarthanam* with *kolakulathadi churnam* and *Bashpa sweda* for 7 days.
2. *Sirootalam* with *kachooradi churnam* and *Nimbamruthadi eranda* for 7 days.
3. *Dhanyamla Dhara* for 4 days
4. *Shirovasti* with *Mahanarayana thaila* for 7 days.
5. *Ksheera Dhoomam*+ *Mughabhyangam* with *Mahanarayana thaila* for 7 days
6. *Nasyam* with *Karpasasthyadi thaila* for 3 days
7. *Shiropichu* with *Mahanarayana thaila* for 7 days.

8. *Sekam* with *Triphala kashayam* and *Bidalakam* with *Triphala churna* and *madhu* for 6 days.

Yoga

Yoga was done for 5 days under a yoga instructor and then the patient was asked to continue the same by himself for 2 months.

1. Loosening exercises
2. Breathing exercises
3. *Anuloma, viloma*
4. *Suryanuloma*
5. *Chandranuloma*, were done respectively.

Discharge medicines:

1. *Dhanadanayanadhi kashaya* 15 ml + 45 ml lukewarm water, twice daily, before food.
2. *Ekangveer rasa* 2-0-2 with *kashaya*
3. *Maharaja prasarini thaila* capsule 0-0-1 with milk (A/F)
4. *Mahanarayana thaila* for external application.

He was advised to continue yoga and diet plan for 2 months.

Assessment:

Patients consent was taken and assessment of the disease condition was made before and after treatment.

Table 4. Assessment of disease condition before and after treatment: Table 1.5. Assessment with grade:

DISCUSSION

Ardita Chikitsa in Ayurveda includes *Nasya*, *Murdhnitaila* and *Tarpana*. In this case, more than a facial palsy patient presented with symptoms of Wernicke's aphasia. Hence the line of treatment was not completely on the classical *Ardita Chikitsa*.

Internal medicines:

Dhanadanayanadi Kashayam: It is indicated in the *Ardita* and *Akshepa Vata*. It is always an option in cases such as Epilepsy, Bell's palsy, stroke due to infarction, trigeminal neuralgia etc. It has a *Kapha-Vata Samana* action, and is *Deepana*, *Pachana*, *Lekhana*, *Ruksha* and *Ushna*. It is mentioned in *Sahasrayogam*, *Vata Roga Chikitsa*.

Ekanga veera rasa is mentioned in *Pakshaghata*, *Ardita*, *Dhanurvata* and *Sarva Vata roga*. It can be given in hemiplegic conditions. It is *Vata-Kapha hara*, *Balya*, *Rasayana*, *Deepana*, *Akshepa hara*, and *Atyantha Teekshna*.

Pathyashadangam kashaya is mentioned especially in the management of *Shiroroga*. This decoction has ingredients having *Ushna Virya* (hot potency) and *Vata Shamaka* (Vata subsiding) property which can be beneficial in *Ardhavabhedaka* as this disease has dominance of vitiation

of *Vata* and *Kapha Dosha*. It helps in improving vision and is beneficial in diseases affecting the eyes.

DA drops or *Darvi* drops is a preparatory medicine which is mainly given for disease conditions affecting the eye.

Panchakarma procedures

Udwarthanam with *Kolakulathadi choorna* along with *bashpa sweda* for 7 days and *Dhanyamladhara* was done for 4 days. *Udwarthanam* and *Dhanyamladhara* are *rukshana* procedures and it was performed in the beginning of treatment to bring *nirama avastha* from *saamavastha* in *Arditha* patients. *Shirotalam* with *Kachooradi Choornam* and *Nimbamruthadi eranda* was done for 7 days. *Sirotalam* is a variant of *Murdhni Thaila*. Here both internal and external treatment was decided in an idea that it should not increase intracranial pressure and to avoid the complications due to high blood pressure.

Shirovasti with *Mahanarayana Taila* done for 7 days has been reported to be having an excellent result on such disorders as it gives strength to the central nervous system particularly brain tissue. It calms down both the mind and the senses which allow the body's natural healing mechanism to release stress from the nervous system by pacifying *Vata dosha*. The luke warm oil used in *Shirovasti* leads to peripheral vasodilation and increases the peripheral circulation which nourishes the tissues, and brings about regenerative changes. *Ksheera Dhoomam* is a form of *Swedana* that comes under the *Nadi Swedana*. These therapies pacify the *vata dosha*. It is *balya* and *brimhana*. This is done to stimulate nerve endings and open the micro channels below skin level due to which the *Nasya dravya* is better absorbed. To potentiate the effect of *Swedana*, decoction of various *Vatashamaka* drugs with milk is taken. *Nasyam* with *Karpasasthyadi Thaila* done for 7 days is *brihmana* and *Vata-Kapha hara*. Many nerve endings which are arranged in the peripheral surface of the mucous membrane, olfactory, trigeminal are stimulated by the *Nasya karma* and impulses are transmitted to the central nervous system. *Shiro Pichu* with *Mahanarayana thaila* was done for 7 days. The ayurvedic treatment of *shiro pichu* falls under the category of *murdhni thaila*. It is an effective ayurvedic treatment advised for prevention and getting rid of many psychosomatic illnesses. *Mahanarayana Thaila* is an ayurvedic medicated oil that can nourish nerves and muscle health while also helping to restore the *vata* balance. *Sekam* with *Triphala kwatham* and *Bidalakam* with *Triphala churna* and *madhu* was done for 6 days. *Triphala* is known to strengthen eye muscles and supports good vision and eye health.

CONCLUSION

From the present case study it can be concluded that Ayurvedic management can produce significant changes in the signs and symptoms of diseases such as aphasia, thereby improving the quality of day to day life of the sufferer. All therapies done in this case had given a combined effect to control the vitiated doshas in the body and thereby nourishing the sense organs. Moreover the internal medicines opted; yoga practices given and diet maintained are having additional effect in relieving the signs and symptoms.

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ORCID

Liya Elias , <https://orcid.org/0009-0005-3468-6527>

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Table1 denoting Dasavidha Pareeksha

1	<i>Dooshyam</i>	<i>Vata dosa, Rasa rakta dhatu</i>	6	<i>Prakriti</i>	<i>Kaphavata</i>
2	<i>Desa</i>	<i>Sadharanam</i>	7	<i>Vaya</i>	<i>Vardhakya</i>
3	<i>Bala</i>	<i>Madhyamam</i>	8	<i>Satwa</i>	<i>Madhyama</i>
4	<i>Kala</i>	<i>Hemantham</i>	9	<i>Sathmya</i>	<i>Sarvarasa</i>
5	<i>Analam</i>	<i>Mandam</i>	10	<i>Ahara</i>	<i>Madhyama</i>

Table 2 Western aphasia battery

Domains	Raw score
Information content	3/20
Fluency , grammar	5/10
Competence and paraphasia.	8/20
Spontaneous speech total score	8/20
<i>Auditory verbal comprehension</i>	
a)Yes/No questions.	9/60
b) Auditory word recognition	4/80
c) Sequential commands	4/80
Auditory verbal comprehension score total.	1.5/10
<i>Repetition</i>	
Repetition score	0/100
<i>Naming</i>	
a) Object naming	0/60
b) Word fluency	2/20
c) Sentence completion	0/10
d) Responsive speech	0/10
Naming and Word finding score total	0.2/10
Aphasia quotient :	19.4/100

Table 3. Motor system examination

		Right	Left
Power	Upper limb	5	5
	Lower limb	4	5
Tone	Arms	Normal	Normal
	Hip	Normal	Normal
	Knee	Normal	Normal
	Ankle	Normal	Normal
ROM	Arms	Possible within limits	Possible within limits
	Legs	Possible within limits	Possible within limits
Reflexes	All reflexes intact		

Table 4. Assessment of disease condition before and after treatment:

		BT	AT
Speech	Aphasia	Comprehension affected Fluent speech	Comprehension Affected Fluent speech
	Dysphonia	NAD	NAD
	Dysarthria	NAD	NAD
HMF		13/30	16/30
Memory	Immediate	Impaired	Improved
	Short term	Impaired	Improved
	Long term	Impaired	Impaired
Muscle power	Upper limb	Bilaterally normal	Bilaterally normal
	Lower limb	Right side is affected	Bilaterally normal

Table 5. Assessment with grade:

	AT	BT
Aphasia	5/6	5/6
HMF	13/30	16/30
Immediate memory	3/5	4/6
Short term memory	2/5	3/5
Long term memory	0/5	1/5
Muscle power	4/5	5/5
Muscle tone	5/5	5/5