



AYURVEDIC UNDERSTANDING AND MANAGEMENT OF CEREBROVASCULAR ACCIDENT (STROKE WITH ISCHEMIA AND HEMORRHAGE): A CASE STUDY

Ayurveda

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ABSTRACT

Stroke or cerebrovascular accidents are the leading cause of morbidity and mortality across the world. Infact the third leading cause after heart diseases and cancer. Strokes can be classified broadly as ischemic and hemorrhagic which accounts for 80% and 20% of the total cases. The prognosis of CVA depends on the type and its fast and appropriate management. A 50 year old male patient who is a k/c/o type 2 diabetes mellitus, hypertension and hypercholesterolemia was admitted to the inpatient department of Sri Jayendra Saraswathi Ayurveda College and Hospital, Chennai on 20.01.2020 with the confirmed diagnosis of stroke (CVA) having both infarct and hemorrhage. The chief complaints were difficulty in walking without support, reduced strength, stiffness and heaviness on the right hand and leg, difficulty in speech, pain in right shoulder joint and knee joint since 4 months. This condition can be understood as *Pakshaghata* in Ayurveda. After proper evaluation of the avastha of the patient, *Avarana chikitsa* along with the *Pakshaghata chikitsa* was adopted in this case. Significant improvements were observed on various subjective and objective parameters. The patient was discharged after 10 days of treatment with oral medications and advised for a follow up after 1 month.

KEYWORDS

Hemorrhage, Infarct, *Pakshaghata*, Stroke

INTRODUCTION:

Stroke is an abrupt onset of focal neurological deficit secondary to a vascular event lasting more than 24 hours. Ten percent of the 55 million deaths that occur every year worldwide are due to stroke. Stroke can be understood as *Pakshaghata* in Ayurveda. In the present case the patient was having typical *Pakshaghata Lakshanas* like *Dakshina paksha cheshta hani*, *Vak stambha* and *Ruja*.² After evaluation of the type of the stroke, the condition was diagnosed as *Dakshina pakshaghata* in *Kapha* and *Pitta Avruta Vata Avastha*. *Avarana chikitsa* along with *Pakshaghata chikitsa* was followed in this case considering both the infarct and hemorrhage.

CASE HISTORY:

1. Patient who was a k/c/o DM, HTN and hypercholesterolemia was asymptomatic before 4 months. On 19.11.19 while he was returning to home from office in the evening around 6 pm, he started experiencing numbness over the right half of the body including face and extremities, severe headache, nausea and reducing strength over the right hand and leg.
2. At around 10 pm on 19.11.19 after taking dinner he suddenly started experiencing slurring of speech with giddiness increasing weakness over both his right hand and leg and he fell down from the chair. He was brought to nearby allopathic hospital immediately and they have diagnosed his condition as cerebrovascular accident and was provided with initial management.
3. MRI-brain with MRA and whole spine screening was done on 20.11.19 at around 10 :00AM and it showed chronic lacunar infarcts in bilateral basal ganglia and thalami with diffuse cerebral atrophy and chronic hemorrhage in bilateral temporo parietal region, Hypoplastic right vertebral artery, posterior disc bulge noted at L4-L5 and L5-S1 levels.
4. Mild improvement was observed after 1 week of treatment in speech and weakness. He was discharged with medications for 1 month and advised to do physiotherapy. So for ayurvedic management he approached Sri Jayendra Saraswathi Ayurveda College and was admitted here on 20.01.2020 with the complaints of reduced strength, stiffness and heaviness on right upper and lower limb, difficulty in walking without support, slurred speech, pain over the right shoulder and knee joint since 4 months.

ON EXAMINATION

Gait – Circumduction gait

HMF

- Conscious and well oriented to time, place and person
- Recent and remote memory – intact
- Speech – Nonfluent Aphasia
- Agraphia – present

Cranial nerves

- Spinal Accessory nerve (Right) – affected
- Hypoglossal nerve – affected

Motor system

Muscle power

Table: No:1

Extremity	BT	AT
Right upper limb	2/5	4/5
Right lower limb	2/5	4/5
Left upper limb	4/5	4/5
Left lower limb	4/5	4/5

Muscle tone

Table: No:2

Extremity	BT	AT
Right upper limb	Hypertonic (+++)	Hypertonic(+)
Right lower limb	Hypertonic (+++)	Hypertonic(+)
Left upper limb	Normal tone	Normal tone
Left lower limb	Normal tone	Normal tone

Muscle Reflex

Table: No:3

Type	BT	AT
Right biceps jerk	3+	3+
Right triceps jerk	3+	3+
Right supinator jerk	3+	3+
Right knee jerk	3+	3+
Right ankle jerk	2+	2+

SENSORY SYSTEM

- Pain
- Touch
- Pressure
- Temperature
- Joint position
- Vibration

Intact on bilateral upper and lower extremities

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TREATMENTS GIVEN**Internal medications**

- *Kalyanaka ghritam* – 2 tsp-0-0 in empty stomach with warm water
- *Dhanadanayanadi Kashayam + Mahamanjishtadi Kashayam* – 20ml-0-20ml B/F with 60 ml boiled and cooled water
- *Dhanwantaram vati* – 1-1-1 B/F
- Capsule Neuro XT – 1-0-1 A/F
- *Triphala churnam* – 0-0-1tsp A/F with warm water
- *Kalyanaka avaleha churnam* – for external application over tongue with *Jambheera swarasa* and honey (OD)
- *Anu tailam* – 2 drops in each nostril as pratimarsha nasyam in evening (OD)

External treatments**Table:No:4**

Treatments	From	To
• <i>Sarvanga Kashaya dhara</i> with <i>Dashamoola kwatham</i> followed by <i>Nadi Swedam</i>	20.01.2020	22.01.2020
• <i>Sarvanga abhyanga</i> with <i>Mahanarayana tailam</i> followed by <i>Nadi swedana</i>	23.01.2020	24.01.2020
• <i>Sarvanga abhyanga</i> with <i>Mahanarayana tailam</i> followed by <i>Patra Pinda Swedam</i>	25.01.2020	30.01.2020
• <i>Yoga basthi</i> • <i>Anuvansha basthi</i> – <i>Guggulu tiktakam ghritam</i> – 30 ml + <i>Ksheerabala tailam</i> 30 ml • <i>Niruha basthi</i> with <i>Erandamooladi kwatha</i> with <i>Manjishta churnam</i> as <i>kalkam</i>	23.01.2020	30.01.2020
• <i>Shiro talam</i> with <i>Ksheerabala tailam</i> and <i>Rasnadi churnam</i>	20.01.2020	30.01.2020

Discharge medications:

- *Kalyanaka Ghritam* – 2tsp-0-0 with warm water B/F
- *Sahacharadi kashayam +Dhanwantaram Kashayam* – 20ml -0-20ml B/F with 60 ml boiled and cooled water
- *Cap Palsineuron* – 1-0-1 A/F
- *Cap Ksheerabala* - 1-0-1 A/F
- *Triphala churnam* – 0-0-1tsp A/F with *Ushna jala*
- *Mahanarayana tailam* – for body massage before bath (OD)
- *Kalyanaka avaleha churnam* – external application over tongue with *Jambheera swarasam* and honey

OUTCOME:**Patient assessed outcomes:**

- Difficulty in walking reduced
- Weakness of the right upper and lower limb reduced
- Heaviness of the right upper and lower limb reduced
- Stiffness of the right upper and lower limb reduced
- Difficulty in speech reduced
- Hand grip was improved on the right hand

Clinician assessed outcomes:

- Power of right upper limb increased from 2 to 4
- Power of right lower limb increased from 2 to 4
- Hypertonicity of right upper and lower limb reduced almost to normal tone.
- There were no changes in the deep tendon reflexes on the right upper and lower limb.
- Improvement in the gait was observed

DISCUSSION:

In the present case, the patient was having both infarct and hemorrhage on the MRI. The patient was having classical *Pakshaghata Lakshanas* like *Dakshina paksha karma hani, Ruja* and *Vak stambha*. So the case was diagnosed as *Dakshina Pakshaghata*. i.e Right sided hemiplegia. Along with these complaints the patient showed *Lakshanas* of *Kapha Avruta Vata*.³ Difficulty in speech was understood as *Kapha Avruta Udana Vata*.⁴ Heaviness in the right upper and lower limb was understood as *Kapha Avruta Vyana Vata*.⁵ Moreover the infarct in b/l basal ganglia can be understood as *Kapha Avarana* to the *Prana vata* which is present in the cortex. Chronic hemorrhage in the left temporo parietal lobe was understood as an *Avarana* by the *Pitta Dosha* to the *Prana vata*. The patient was also having *Bhrama* as one complaint which indicated *Pitta Avruta Vata Avastha*.⁶ Hence the

Avastha was understood as *Kapha Pitta Avruta Vata*. So the diagnosis was made as *Pakshaghata* in *Kapha pitta Avruta Avastha*.

Since the patient was in *Avarana* condition, the treatment was started initially with *Avarana chikitsa*. In *Kapha Pitta Avruta Vata*, prior consideration should be given to *Pitta Dosha*. Hence *Drava Swedanam* was initiated as the first line of management in the form of *Dashamoola Kashaya Dhara*. It helped in *Pitta Kapha Shamana*. After three days of *Drava Sweda*, there was a considerable reduction in the stiffness and heaviness over the right upper and lower extremities. This showed the reduction in *Kapha Avarana*. Hence the treatment was shifted to *Sarvanga Abhyanga* with *Mahanarayana Tailam* and *Nadi Swedanam*. *Mahanarayana Tailam* is *Vata Pitta haram* as it contains *Aja dugdha*. After 2 days *Nadi swedanam* was changed to *Patra pinda swedanam*. It is *Vata Kapha hara* type of *Swedana* which further reduced the heaviness and stiffness with an increase in the power of right upper and lower limb. *Yoga Basthi* was started from the 4th day of treatment with *Anuvasanam - Guggulu tiktaka ghritam* and *Ksheerabala tailam*. *Guggulu tiktaka ghritam* is *Kaphapittavruta vata haram*. It is also indicated in *Majja Gata Vata*. *Ksheerabala tailam* is targeted to *Pitta Avruta Vata* as it is both *Pitta* and *Vata haram*. *Asruk dosha nashanam* and *Bruhmana* thereby helped in improving the strength of the right upper and lower limb. It is also *Swaryam* in nature thereby helped in improving the speech. *Erandamooladi* was administered as *Niruha Basthi* with *Manjishta Churnam* as *Kalkam*. *Erandamooladi* is *Kapha Avruta Vata haram* and *Manjishta* as *kalkam* which also helped in reducing the *Pitta Avarana*. *Shirotalam* was done from the starting day of treatment till the last day with *Ksheerabala tailam* and *Rasnadi churnam*. *Ksheerabala* was targeted towards *Pitta avruta vata* and *Rasnadi churnam* helped in reducing the *Kapha* and *Vata*. *Anu tailam* was administered as *Pratimarsha nasyam*. It helped in *Vata Pitta Shamanam* in the *Shiras* and also did *Indriya prabodhanam*. *Shamana oushadhis* include *Dhanadanayanadi kashayam* and *Mahamanjishtadi kashayam* in combination. *Dhanadanayanadi* helped in removing the *Kapha avarana* and *Mahamanjishtadi* removed *Pitta Avarana* and also did *Rakta Prasadana*. *Kalyanaka avaleha churnam* was administered for improving the *Vak pravrutti*. It helped in reducing the *Stambha* over the tongue through *Kapha Vilayana* by its major ingredient. i.e *Saindhava*. It also contained *Vacha* which has the *Karma* of *Swarya*. *Kalyanaka ghritam* was started from the first day as a *Shamana snehana*. It does the *Vata shamana* and also helped in improving the speech as it is indicated in *Skalat vaachi*. *Triphala churnam* was given for the purpose of *Vata anulomanam*. Capsule Neuro XT contains *Ekanga Veera Rasa*, *Maha Vata Vidhvamsana Rasa*, *Vata Kulantaka Rasa*, *Vata Gajankusha Rasa*, *Bala* and *Shuddha Shilajatu*. All these ingredients helped in *Vata Shamana* and *Rakta Prasadana*. These ingredients are also directly indicated in *Pakshaghata*.

CONCLUSION:

- Stroke with hemiplegia can be understood as *Pakshaghata* in *Ayurveda*.
- The treatment can be planned after analyzing the type of stroke and *Avastha* of the *Roga*.
- Ischemic stroke can be approached through *Kapha Avruta Vata Chikitsa* along with *Pakshaghata chikitsa*.
- Hemorrhagic stroke can be approached through *Pitta Avruta Vata Chikitsa* along with *Pakshaghata chikitsa*.
- *Mada, Murcha, Sanyasa Chikitsa* can be incorporated into the treatment of stroke if the patient has any impairment in higher mental function.
- In this case *Kapha Pitta Avruta Vata Chikitsa* was adopted alone as the patient was having both infarct and hemorrhage without any impairment of higher mental functions.
- Significant improvements were observed on various subjective and objective parameters after 10 days of treatment.
- Hence a stroke case with both ischemia and hemorrhage can be approached through *Kapha and Pitta Avruta Vata Chikitsa* followed by classical *Pakshaghata Chikitsa* with due consideration of *Roga* and *Rogi*.

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