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ISSN 2321 - 6328

Research Article

AYURVEDIC MANAGEMENT OF PAKSHAGHATA (ISCHAEMIC STROKE): CASE REPORT

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Article Received on: 26/06/21 Accepted on: 29/07/21

DOI: 10.7897/2321-6328.093144

ABSTRACT

Stroke occurs when there is interrupted blood supply to a part of brain or when the blood supply is reduced, leads to brain cell damage. Stroke is mainly of two types: ischemic and haemorrhagic stroke. Ischemic type of stroke is the most common type. The prevalence of stroke is approximately 250 per 1 lakh person and 9.95 percent of total death. The present case reported to the Sri Jayendra Saraswathi Ayurveda college and hospital, Nazarathpettai, Chennai, Tamilnadu with the complaints of inability to move left hand and left leg with the history of stroke 6 months back, also had slurred speech. This patient's condition improved very well by internal medicines and panchakarma procedures. At the end of the treatment the patient's upper and lower limbs range of movements and functions improved. There was also considerable recovery in the mobility, mode, energy and language ability. Recovery was promising and worth documenting.

KEY WORDS: Ayurveda, pakshaghata, stroke, hemiplegia

INTRODUCTION

Stroke is defined as rapid onset of focal neurological deficit resulting from diseases of the cerebral vasculature and its contents, stroke represents third most common cause of death in developed nations¹. According to WHO data published on 9 December 2020 stroke is the second major cause for death globally². Stroke death in India reached 9.95 percent. Stroke sometimes referred as cerebrovascular insult (CVI) where the brain function is hampered due to lack of blood supply (ischemia or haemorrhage) based on the blockage area of the arteries or in its branches effect will vary. The clinical presentations of contralateral hemiplegia commonly manifest based on the area affected. The four most common causes of paralysis are stroke, head injury, spinal cord injury and multiple sclerosis³.

The term pakshaghata means paralysis of one half of the body, where “paksha” denotes half of the body and “aghata” denotes impairment of indriyas such as jnanendriya, karmendriya and manas. Jnanendriya is considered as the sensory system and karmendriya as part of motor system, which is supposed to be controlled and guided by manas. Pakshaghata comes under vatajananathmajavyadhi⁴.

The aggravated vata causing paralysis of one side of the body causing immobility of that side in association with pain and loss of speech is called paksha-vadha⁵. Pakshaghata has cardinal features such as jihwa spurana (tongue fasciculation), bandha vimokshana (joint weakness), chetah hani (impaired motor activity) and hasta pada sankocha. Panchakarma plays a major role and has no adverse effects in treating neurological condition like pakshaghata. The study is carried out as per International conference of Harmonization-Good Clinical Practices Guidelines (ICH-GCP).

CASE DESCRIPTION

A 62 years old male patient came with complaints of inability to move his left hand and left leg past 6 months. He had slight drooling of saliva from right side of his mouth, sluggish and abnormal speech past 6 months. He also complaints of frequent micturition and abdominal pain along with heart burn from last one month. The informed consent has been obtained from the patient.

HISTORY

The patient is a known case of diabetes mellitus type II and hypertension past 10 years. On 10/9/2020 patient felt giddiness, mouth deviation was noted and numbness of left hand and left leg was present. He was admitted in a modern hospital and underwent CT and MRI scans, a blood clot was found. He was discharged after 10 days once the vitals became stable. Again on 22/9/2020 he was unable to lift his left hand and left leg thereafter admitted in a modern hospital and diagnosed with hemiplegic paralysis. Later he got discharged from the hospital but was unable to move his upper and lower limbs along with speech difficulty and drooling of saliva.

FAMILY HISTORY

Patient's mother had attack of stroke at 59 years of age was also a known case of hypertension.

Patient's father was a known case of diabetes mellitus type II.

INVESTIGATION

USG Abdomen (17/03/2021)

Impression: Grade II prostatomegaly, mild renal cortical echoes

MRI Brain with angiogram (10/09/2020)

Impression: Acute non haemorrhagic lacunar infarcts in posterior capsule in right side, grade II cortical atrophy, chronic infarct.

Physical examination

Blood pressure – 150/90 mmHg

Respiratory rate – 18/min

Edema – mild edema in left lower limb

Icterus – absent, clubbing – absent, cyanosis – absent, pallor – absent

Neurological examination

Before treatment

- i) Forehead frowning – not possible on left side
- ii) Eyebrow raising - not possible on left side

- iii) Eye closure – incomplete closure on left side
- iv) Teeth showing - not possible on left side denture
- v) Blowing of cheek - not possible on left side
- vi) Nasolabial fold – naso labial fold loss on left side
- vii) Taste perception – poor
- viii) Dribbling of saliva – dribbling of saliva from the left side
- ix) Bells phenomenon – not present
- x) Angle of mouth deviated towards the right side

MOTOR EXAMINATION:

- 1) Tone of muscle: diminished in left side
- 2) Muscle bulk: reduced in left side
- 3) Gait: hemiplegic gait

Table 1: Muscle power analysis of upper limb before treatment

| MUSCLE INVOLVEMENT | RIGHT | LEFT |
|--------------------------------|-------|------|
| Biceps | 5 | 2 |
| Triceps | 5 | 2 |
| Flexor of wrist joint | 5 | 2 |
| Extensor of wrist joint | 5 | 2 |
| Deltoid muscle | 5 | 2 |
| Flexor digitorum Superficialis | 5 | 2 |

Table 2: Muscle power analysis of lower limb before treatment

| MUSCLE INVOLVEMENT | RIGHT | LEFT |
|-------------------------|-------|------|
| Flexor of hip | 5 | 2 |
| Extensor of hip | 5 | 2 |
| Quadriceps | 5 | 2 |
| Hamstring | 5 | 2 |
| Flexor digitorum longus | 5 | 2 |
| Extensor of toes | 5 | 2 |

Table 3: Deep tendon reflexes

| REFLEX | UPPER LIMB | | LOWER LIMB | |
|----------------|------------|-------|------------|-------|
| | LEFT | RIGHT | LEFT | RIGHT |
| Biceps | 3 | 2 | - | - |
| Triceps | 3 | 2 | - | - |
| Knee | - | - | 3 | 2 |
| Ankle | - | - | 3 | 2 |
| Babinski sign: | Positive | | | |

Table 4: Internal medicines

| S.no | Date | Aushadha | Matra | Anupana | Time of Administration |
|------|--------------------|--|------------------|------------------|------------------------|
| 1 | 18/3/21 to 25/3/21 | Bruhathyadhi kashayam ⁶ | 15ml twice daily | 45 ml warm water | B/F |
| 2 | 18/3/21 to 25/3/21 | Dhanwantara gulika | 1-0-1 | With kashayam | B/F |
| 3 | 18/3/21 to 25/3/21 | Chandraprabhavati | 1-0-1 | With kashayam | B/F |
| 4 | 18/3/21 to 25/3/21 | Tablet Alsarex | 1-0-1 | Warm water | A/F |
| 5 | 18/3/21 to 31/3/21 | Gandharvahastadi kashayam ⁷ | 15ml twice daily | 45 ml warm water | B/F |
| 6 | 25/3/21 to 31/3/21 | Ural BPH tablet | 1-0-1 | Warm water | A/F |
| 7 | 25/3/21 to 31/3/21 | Tablet Hyponidd | 1-0-1 | Warm water | A/F |
| 8 | 25/3/21 to 31/3/21 | Manasamitravati | 0-0-2 | Warm water | At bedtime |
| 9 | 25/3/21 to 31/3/21 | Gandharvahastadi erandatailam | 5ml | Kashayam | B/F |

Table 5: Treatment procedure

| S.no | Date | Procedure | Medicine | Duration |
|------|--------------------------|---|---|----------|
| 1 | 18/3/21 To 21/3/21 | Dhanyamladhara Udgharsana | Kulattha choornam | 4 days |
| 2 | 22/3/21 To 24/3/21 | Dhanyamladhara, Udgharsana(L) Thalam | Rasnadhi choornam+ Ksheerabala tailam | 3 days |
| 3 | 25/3/21 To 27/3/21 | Thalam Sankarasweda Jihva lepanam | Kottamchukkadi choornam+ dhanyamlam Kalyanaka avaleha choorna + kalyanaka ghritam + honey | 3 days |
| 4 | 28/3/21 To 31/3/21 | Sarvanga abhyanga Siropichu Marsha nasyam | Karpasasthyadi tailam+ Dhanwantharam tailam Dhanwantharam tailam Karpasasthyadi tailam (4 drops each nostril) | 4 days |

OBSERVATION

Table 6: Muscle power analysis of upper limb at 2 weeks after treatment

| MUSCLE INVOLVEMENT | RIGHT | LEFT |
|-----------------------------------|-------|------|
| Biceps | 5 | 4 |
| Triceps | 5 | 4 |
| Flexor of wrist joint | 5 | 4 |
| Extensor of wrist joint | 5 | 4 |
| Deltoid muscle | 5 | 4 |
| Flexor digitorum Superficialis | 5 | 4 |

Table 7: Muscle power analysis of lower limb at 2 weeks after treatment

| MUSCLE INVOLVEMENT | RIGHT | LEFT |
|-------------------------|-------|------|
| Flexor of hip | 5 | 4 |
| Extensor of hip | 5 | 4 |
| Quadriceps | 5 | 4 |
| Hamstring | 5 | 4 |
| Flexor digitorum longus | 5 | 4 |
| Extensor of toes | 5 | 4 |
| Sciatic | 5 | 4 |

Table 8: Barthel index

| | Domain name | Range of score | BT | AT |
|---|-----------------------------------|---|----|----|
| 1 | Feeding | 0 = unable 5 = needs help in cutting, spreading Butter, etc or requires modified diet 10 = independent | 5 | 10 |
| 2 | Bathing | 0 = dependent 5 = independent (or in shower) | 0 | 0 |
| 3 | Grooming | 0 = needs to help with personal care 5 = independent face/hair/teeth/shaving (implements provided) | 0 | 5 |
| 4 | Dressing | 0 = dependent 5 = needs help but can do about half unaided 10 = independent (including buttons, zips, laces etc) | 0 | 5 |
| 5 | Bowel | 0 = incontinent (or needs to be given enemas) 5 = occasional accident 10 = continent | 5 | 10 |
| 6 | Bladder | 0 = incontinent or catheterized and unable to manage alone 5 = occasional accident 10 = continent | 5 | 10 |
| 7 | Toilet use | 0 = dependent 5 = needs some help, but can do something alone 10 = independent (on and off, dressing, wiping) | 0 | 5 |
| 8 | Transfers (bed to chair and back) | 0 = unable, no sitting balance 5 = major help (of one or two people, physical) can sit 10 = minor help (verbal or physical) 15 = independent | 5 | 10 |
| 9 | Mobility (on level surface) | 0 = immobile or <50 yards 5 = wheelchair independent, including corners, >50 yards | 5 | 15 |

| | | | | |
|----|--------|--|----|----|
| | | 10 = walks with help of one person (verbal or physical), >50 yards 15 = independent (but may use any aid; for example stick), >50 yards | | |
| 10 | Stairs | 0 = unable 5 = needs help (verbal, physical, carrying aid) | 0 | 5 |
| | Total | | 25 | 75 |

RESULT AND DISCUSSION

The spasticity of both upper and lower limbs got reduced within 4 days of treatment. Then by the 6th day he was able to move his left hand and was relieved of fatigue. By 8 days of treatment he was able to walk with support. Then there was considerable improvement in movements of upper and lower limb was noted and the speech improved by 12 days of treatment.

Vata vyadhi is caused due to dhatus kshaya or marga avarodha and because of samprapti vishesha the same nidana may give rise to different vata vyadhi according to the sthana of dosha dushya sammurchana.

The patient having complaints of inability to move his left hand and left leg, inability to speak properly, drooling of saliva and deviation of angle of mouth was diagnosed with contralateral hemiplegia with facial paralysis involving upper motor neuron (UMN). As per the MRI scan report the patient has acute non haemorrhagic lacunar infarcts in posterior capsule in right side, grade II cortical atrophy, chronic infarct. This causes difficulties in cognitive skills and also inability to do coördinative movements.

According to Ayurveda this patient would have developed pakshaghata by indulging in nidana like alpa, sheeta, ruksha ahara sevanam, anupa mamsa atisevanam, madhya, mental factors like chinta, kopa, vishada etc. These factors led to vata and kaphadosadoshtti, disturbance in rajo and tamo manasika bhavas, which in turn has led to jataragni and dhatwagni mandhyam. The symptoms of dosha coupled with ama like loss of strength, blockage in functions of vata, laziness, indigestion, loss of appetite was present⁸.

The general line of treatment for pakshaghata involving swedanam, snehanam and virechanam was done in this case considering the dosha predominance and avarana involvement. Dhanyamla dhara was done initially as it is having properties of amla rasa, deepana, pachana, rochana, preenana, laghu and tikshna thus useful in vata disorders where kapha and/or ama is associated⁹. Swedana removes stambha (stiffness), gourava (heaviness), sheeta (coldness) from the body¹⁰. Swedana is done to bring the vitiated dosha to the alimentary canal for eliminating it out of the body¹¹. Udgharsana is said to be useful in kandu, kota and is also kaphavatahara¹². Thus kapha vilayana happens resulting in srotovishodana. Abhyanga increases the muscle power, reduces effects of aggravated vata and also nourishes the body¹³. Snehanam brings about metabolic changes and stimulate vasodilatation thus increasing the blood circulation. Mridu virechanam mentioned by Acharya Susrutha for the treatment of Pakshaghata, is dourbalya hara (reduces weakness), glanihara(fatigue), does srotovishuddhi (clarity of channels), buddhi indriya manah shuddhi (clarity of sensoria and intellect), indriya samprasada (improves sensory and motor functions)¹⁴. Nasya is useful in urdwajatrugata vihara¹⁵. The olfactory nerves are connected with the higher centres of brain hence the drug administered through nostrils has effect on nervous system function and regulation of endocrine system. Siro pichu considered as murdha tailam helps in relieving stress thus establishing a psychosomatic balance, is also useful in diseases in shiras. During the course of treatment speech improved, patient was able to lift his affected left hand and also walk with support.

CONCLUSION

This case study was on a successfully managed pakshaghata patient through Ayurveda treatment protocol. Timely management of stroke patients with correct medication can prevent disability to a greater extend as the immediate management of stroke prevents the brain damage and thereby helps the patient to recover faster from the neurological problems.

Ayurveda signifies this by mentioning the nava pakshaghata chikitsa to be krichrasadhyha. Hence immediate management of stroke and paralysis will reduce the structural damages to the brain and might reduce the effect of paralysis and this makes recovery easier.

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Cite this article as:

Shilpa Sasikumar and Vipin S. G. Ayurvedic management of pakshaghata (ischaemic stroke): Case report. J Biol Sci Opin 2021;9(3):29-33.

<http://dx.doi.org/10.7897/2321-6328.093144>

Source of support: Nil; Conflict of interest: None Declared

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