



ORIGINAL RESEARCH PAPER

Ayurveda

AN AYURVEDIC VIEW AND MANAGEMENT OF STROKE

KEY WORDS: Stroke, Pakshaghata, Snehana, Swedana, Vasthi.

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ABSTRACT

According to WHO, stroke is defined as “rapidly developing clinical signs of focal disturbance of cerebral function with symptoms lasting 24 hours longer or leading to death, with no apparent cause other than vascular origin”. It occurs when a blockage or bleed of blood vessels intercepts or reduce blood supply to brain resulting in brain cell death. In Ayurveda, it can be clinically compared with pakshaghata. The cause of pakshaghata is prakupita vata. In acute stage, it can be managed by allopathic treatment modalities. But there is no much treatment for the residual spasticity of chronic patient. Ayurveda plays an important role in such situation. As the main dosha vitiated is vata, the treatment principles of pakshaghata include snehana, swedana, mrdu virechana, basti etc. Samana yogas are also adopted which proves beneficial for promotion and preservation of health.

INTRODUCTION

Stroke is a common medical emergency and third leading cause of death worldwide. Stroke is the sudden death of some brain cells due to lack of oxygen when the blood flow to brain is lost by blockage or rupture of an artery to brain. Stroke comprises approximately 10% of all deaths. The prevalence of stroke in India ranges from 40-270 per 10000 population. Hemiplegia is one of the most frequent presentation of stroke. In Ayurveda, stroke can be correlated with pakshaghata which is one among 80 nanatmaja vata vyadhi. There are two types of stroke- ischemic and haemorrhagic stroke. Haemorrhagic stroke is less common than ischemic stroke. There are many risk factors for stroke such as alcohol, hypertension, vascular anomaly etc. Sensory aphasia is the major symptom which result from stroke. Pakshaghata is a kevala vatavyadhi and results because of vatakopa. According to Acharya Charaka, stroke is clinically compared to pakshawadha and Acharya Susruta compared with pakshaghata. The changing lifestyle and food habits leads to vatakopa affecting sira and snayu of body and face. The main treatment includes snehana, swedana, mrdu virechana, vasthi, nasya, shirodhara etc.

Stroke: Modern Aspect

Types of stroke

1. **Ischemic stroke:** Caused by a blood clot that block or plugs a blood vessel in the brain.
2. **Haemorrhagic stroke:** Caused by a blood vessel that breaks and bleeds into the brain.
3. **Transient ischemic stroke/mini stroke:** Occurs when the blood supply to the brain is briefly interrupted.

Causes Of Stroke

Ischemic stroke: There are many causes for ischemic stroke which are as follows:

1. **Cardio embolic stroke:** Caused by heart disease and is primarily due to embolism of thrombotic material forming on the atrial/ventricular valve.
2. **Artery to artery embolic stroke:** Thrombus formation on atherosclerotic plaque may embolise to intracranial arteries.

Main causes include thrombosis, embolism, artherosclerosis, atrial fibrillation, abnormalities of heart valves.

Haemorrhagic stroke: The main cause includes:

- Hypertension
- Infections
- Tumours
- Intercerebral haemorrhage
- Blood clotting deficiency
- Vascular anomalies

RISK FACTORS

Non modifiable risk factors:

- Age
- Gender- males are more prone to the incidence than females.
- Previous vascular events like MI
- Hereditary

Modifiable Risk Factors

- Hypertension
- Cigarette smoking
- Dyslipidemia
- Cardiac diseases
- Diabetes mellitus
- Alcoholism

SYMPTOMS

Symptoms vary depending on severity and can lead to long term health problems. Main symptoms includes:

- Confusion including difficulty in speaking as well as in understanding speech.
- Headache, possibly with altered consciousness or vomiting.
- Numbness or inability to move parts of face, arm or leg, particularly on one side of the body.
- Vision problem in one or both eyes.
- Difficulty in walking, dizziness and lack of coordination.

Depending on the speed of diagnosis and treatment, a person can experience temporary or permanent disabilities after a stroke. Some people may experience:

- Bladder or bowel control problems.
- Paralysis or weakness on one or both sides of body.

INVESTIGATIONS

Stroke begins rapidly. For best outcome, a person should receive treatment at a hospital within 3hrs after first symptom appears.

Investigation Includes:-

- **Physical examination:**-The doctor should enquire about medical history, check for blood pressure, muscle strength, reflex, sensation, vision and coordination.
- **Blood test:** In order to determine if there is high risk of bleeding or blood clots.
- **CT scan:** It helps to identify or exclude haemorrhage as the cause of stroke and also identifies neoplasms, abscess, and other conditions masquerading as stroke. Brain CT obtained in the first several hours after an infarction generally show no abnormality and the infarct may not be seen reliably for 24-48 hours.
- **MRI:** It reliably document the extent and location of infarction in all areas of the brain, including the posterior fossa and cortical surface.
- **Cerebral Angiography:** It is the golden standard for identifying artherosclerotic stenosis of the cerebral

arteries and for identifying other pathologies like aneurysms, vasculitis, vasospasm, intraluminal thrombi etc.

- Carotid Ultrasound: This is done in order to assess blood flow in the carotid arteries and to rule out if there is any narrowing or plaque present.
- Electrocardiogram

TREATMENT

Management of ischemic stroke

After diagnosis, the first aim of management is to prevent reverse brain injury. The following are the treatment measures adopted in ischemic stroke:

- Providing medical support in order to optimise cerebral perfusion in the surrounding ischemic penumbra.
- Intravenous thrombolysis.
- Antithrombotic treatment.
- Neuro protection – It is the treatment which prolongs the brain's tolerance to ischemia.

Management Of Haemorrhagic Stroke

1. Potential treatment of intra cranial haemorrhage in order to arrest or reduce the bleeding in the initial few hours after haemorrhage.
2. Removing blood from parenchyma.
3. Management of raised intracranial pressure and decreased cerebral perfusion.
4. Adequate general support.

PAKSHAGHATA

In Ayurveda, clinical symptom of stroke can be correlated to features of pakshaghata.

Nidana of pakshaghata

1. **Aharaja nidanas:** Excessive intake of vata prakopa aharas like sita, rooksha, laghu aharas, Katu, Thiktha rasa aharas.
2. **Viharaja nidanas:** Indulging in excessive activities, prolonged wake-up at night, chronic disorder, physical trauma, vegadharana, heavy object lifting, excessive walking or exercise, excessive loss of blood or semen.
3. **Manasika nidanas:** Chinta, soka, bhaya, krodha leads to rasa kshaya, and ojo nashana leading to vatakopa. There is significant relation between high levels of anger and incidence of stroke.

Types Of Pakshaghata

Classification of pakshaghata has been given under the explanation of its prognosis:

1. Sudhavataja pakshaghata
2. Pitta samsruta pakshaghata
3. Kapha samsruta pakshaghata
4. Dhatukshayaja pakshaghata

Samprapti

Due to vatakopa, paralysing of one side of body causes immobility of that side in association with pain and loss of speech. By affecting half of body, aggravated vata causes constriction of siras and snayu as a result there is contracture of either one leg/ hand along with piercing type of pain. This ailment is called Ekanga. If it pervades whole body, it is called Sarvangaroga.

ROOPA

There is no poorvaroopa for vatavyadhi. The poorvaroopa of stroke can be correlated with transient ischemic attack. The features of stroke can be correlated with features of pakshaghata, aridita, moorcha.

Roopa Of Pakshaghata And Stroke

1. **Akarmanyata of ardhakaya**- Weakness of the body.
2. **Achaitanya of ardhakaya**- Numbness of one side of body.
3. **Vaksthambha**- Slurred speech, aphasia.

4. Hasta and pada sankocha- Increased tone of upper limb and lower limb.

5. Toda and soola of hasta and pada- Central post stroke pain syndrome.

6. Santapa- Fever is most common after intracerebral hemorrhage.

7. Moorcha- Diminishing level of consciousness.

Roopa of Ariditha and Stroke

1. **Vakrekarothi vakraartham**- Facial deviation.
2. **Avyaktha vak**- Slurred speech.

PROGNOSIS

- Sudhavata pakshaghata and pitta samsruta pakshaghata are sadhyam.
- Dhatukshayaja pakshaghata due to blood loss is considered as asadya while due to exertion is considered as krchrasadhyam.

TREATMENT

The condition stroke can be correlated to pakshaghata. So the main treatment protocol adopted for stroke is that of pakshaghata. Apart from that, the treatment of ariditha, apatana etc are also adopted with respect to clinical presentation in stroke patient. In Ayurveda, there are specific treatment for pakshaghata. Stroke can be better managed by the Ayurveda principles of management namely :

1. **Nidana Parivarjana**:- By avoiding the Pakshaghata nidanas, further progression can be arrested.
2. **Shodhana**:- The main treatment according to Susruta includes snehana, swedana, mrdu shodhana, vasthi, nasya sirovasthi, upanaha. The treatment protocol of Charaka and Vagbhata are more or less similar which includes Sneha, swedana, and mrdu virechana.
3. **Samana chikitsa and pathya apathya**:- Samana chikitsa include kasaya yogas, choorna yogas, rasayana, external application of taila etc.

Theekshna virechana as well as vasthi are advised by Bhavaprakasha.

- Snehana: It is adopted in Sudhavata and Dhatukshayaja pakshaghata and is done through different means such as internal medicines (taila, Vasa, ghrta, anuvasana vasthi, nasya), external therapies (abhyanga, pichu, Seka) and through medicated diets (ksheera, yusha, mamsa rasa mixed with Sneha). Through this, rookshatwa is reduced and pratilomatwa of vata is corrected.
- Sweda:- The property of sweda to liquify leenadosha proves to be beneficial in management of stroke. Artherosclerotic plaque formation in stroke is considered as leenadosha. Also spasticity of limb can be reduced by ushna guna of sweda. Both snigdha and rooksha sweda are adopted based on condition.
- Virechana:- The type of virechana mentioned is Sneha virechana. It helps to eliminate doshas from koshta. Mrdu shodhana is administered in the form of virechana in stroke patients. In stroke patients, cerebral oedema manifest in 2nd or 3rd day and to reduce intra cranial pressure, diuretics are administered. Administration of virechana can be equated to same extend.
- Vasthi:- Asthapana vasthi is effective in conditions involving stiffness of body parts, weaknesses of lower limb. Anuvasana vasthi improves cognitive function and helps in proper evacuation of bowel.
- Sirovasthi:- It is indicated in numbness, facial palsy, sleep disturbances which are common presentation in stroke patient. Susruta explained a special sirovasthi called Mastiskya in the context of pakshaghata.
- Nasya:- It helps to strengthen indriyas, purifies srotas of siras. Brhmana Nasya is suggested which is specifically indicated in disturbances in speech, altered sensorium which are the common presentation in stroke patient.

Besides above treatment, salvana upanaha, abhyanga with Anutaila, Anuvasana vasthi using Bala taila are also indicated in pakshaghata.

DISCUSSION

Stroke occurs when there is blockage or bleed in blood vessels leading to interruption in the supply of blood flow to the brain. The stroke can be correlated to pakshaghata which is one among the nanatnaja vata vyadhi. The pathological phenomenon of vata is playing central role in pakshaghata. The major risk factors for stroke include both modifiable and non modifiable factors like age, smoking, hypertension, heart disease etc. The symptoms include numbness of face, arm, leg, slurred speech, confusion etc. As per Ayurvedic view, the changing life style and bad food habits leads to vata kopa, leading to constriction of sira and snayu. As the main dosha vitiated is vata, snehana, swedana, mrdu virechana, basti are considered as best way to treat stroke patient. In addition, samana yogas, physiotherapy etc proves to be beneficial for management of hemiplegia.

CONCLUSION

Stroke is a common medical emergency. In acute stage, it can be managed by allopathic treatment modalities. But in chronic cases, there is no much treatment modalities. In such cases Ayurveda plays important role in safe and effective management of stroke. Though stroke is difficult to manage, if treated in appropriate time using suitable internal and external medication, good outcomes are obtained. Besides panchakarma therapy, occupational therapy, physiotherapy etc should be incorporated for its complete management.

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