AN OBSERVATIONAL STUDY ON RELATION BETWEEN SHARIRA PRAKRITI AND PAKSHAGHATA WITH SPECIAL REFERENCE TO CEREBROVSCULAR ACCIDENT

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ABSTRACT

In classics the concept of different *Rogi Pariksha* (Examination technique) is explained. *Prakriti* is the first among the *Rogi Pariksha, Prakriti* is the innate nature or constitution of an individual, which is a non-pathological state of the *Dosha* persisting from birth till death which is formed at the time of conception. Based on the *Prakriti* there will be appearance of characteristics of body feature both internal as well as external. And it is been mentioned that if *Vatika* disorders afflict the person of *Vata Prakriti* individual there is a definite severe aggravation of *Vata* being the integral part of *Prakriti* and leads to complication and is difficult to cure. One among such *Vatavyadhi* is *Pakshaghata, Pakshaghata* is a disease in which half of the body either right or left gets paralysed or become lifeless which mimics with hemiplegia, which occurs due to indulging in *Vata Vyadhi Nidana*. The disease *Pakshaghata* can be co-related with the disease Cerebrovascular Accident based on the presenting features as explained in classics. Cerebrovascular Accident is defined as an abrupt onset of the neurologic deficit that is attributable to a focal vascular

cause. Cerebrovascular accident is the third most common cause of death. with annual incidence of between 180 and 300 per 1 lakh people. Here the attempt is made to analyse the *Prakriti* of the patients of *Pakshaghata*. which may prove helpful to build preventive strategies based on Ayurvedic principles and personalized care for the suffering population by different treatment modalities.

KEYWORDS: Prakriti, Pakshaghata, Cerebrovascular Accident.

INTRODUCTION
Prakriti means *Swabhava* i.e., nature of an individual or the constitution of a person[1] and *Swabhava* meaning definite form of entities or the exact nature[2] According *Acharya Vagbhata Prakriti* is the characterstic feature of body which is both internal and external.[3]

According to *Rasavaisheshika Sutra, Prakriti* is defined as the group of characters inherited by an individual from *shukra* and *shonita* of the parents depending upon the pre-existing doshik dominance prevailing at the time of fertilization. i.e., in the development of fetus, due to its own reasons *Dosha* become intensified. This non-pathologenic intensified status of *Dosha* remains constant from birth till death. This constant *Dosha Avastha* is called *Prakriti* of that individual.[4]

Various factors influence the formation of Prakriti such as the dominance of dosha in Shukra and Shonita during conception, season and condition of the uterus, food, and regimen of the mother, and composition of *Mahabhuta* comprising the *fetus.[5]*

While explaining the Rogi Pariksha, Acharyas delt the importance of Prakriti Pariksha.
Seven types of *Prakriti* in people are observed. Three types with the predominance of single *Dosha*; three types with the predominance of two *Dosha* and one with a predominance of all three *Dosha.[6]*

Even though these individuals with *Ekadoshaja Prakriti* by birth are having single predominant dosha in the body it is considered as *deha prakriti* unless and until they get vitiated by the *Nidanas* and produce *vikara* in the body.

Sama prakriti person are always considered as healthy and *ekadoshaja prakriti* are always prone to get disease. Thus, it is mentioned as *Vataladya Sadatura.*[7]

Ekadoshaja Prakriti individual are always considered as *Atura (Rogi)*. Peculiar characteristics of this is that *Vatala Prakriti* person are prone for predominantly *vataja* disorders, same as that with *Pittaja Prakriti* and *Kaphaja Prakriti*.[8]

One among such *Vatavyadhi* is *Pakshaghata* which occurs due to indulging in *Vata Vyadhi Nidana*.

Pakshaghata is a disease characterized by *Cheshtanivriti*(loss of movement) with *Vama* or *Dakshina Pakshahanana* (Hemiparesis to hemiplegia) other symptoms include *Ruja* (Pain), *Vakstambha* (Dysarthria or Aphasia) *Sandhi Bandha Vimoksha* (Disuse Atrophy), *Achetana* (Loss of sensation or consciousness), *Padasankocha-hastam*(Spasticity in limbs).[9]

The disease *Pakshaghata* can be co-related with the disease Cerebrovascular Accident based on the presenting features as explained in classics. Cerebrovascular Accident is defined as an abrupt onset of a neurologic deficit that is attributable to a focal vascular cause which includes ischemic and haemorrhagic stroke.[10]

It is very essential for a physician to know both physiological and pathological composition of *Dosha* in the body, thus knowledge about the *Prakriti* is very useful, it gives idea about the possible aetiology, strength of the disease process, strength of the patient, prognosis and selection of individualized or personalised medication. On the preventive part it helps in guiding the suitable lifestyle.

AIM AND OBJECTIVES

1. To assess the *Sharira Prakriti* in patients with *Pakshaghata*.
2. To analyse the co-relation between *Sharira Prakriti* and *Pakshaghata* with special reference to Cerebrovascular Accident.

MATERIALS AND METHODS

Source of data

Source of data

Patients attending OPD & IPD of Sri Dharmasthala Manjunatheshwara Ayurveda Hospital, Udupi fulfilling the inclusion and exclusion criteria will be selected for the study.

Study design

It is an observational type of study on minimum of 50 patients diagnosed with Cerebrovascular disease using the diagnostic parameters.

A special Performa prepared which includes the details of history taking to identify the incidence of probable Nidana, physical signs and symptoms was prepared and patients were analysed and selected accordingly.

Prakriti assessment was carried out by the validated Prakriti assessment scale prepared by CCRAS, New Delhi.

Diagnostic criteria

1) Based on Brunnstrom Stages of Stroke Recovery.
2) Clinical features of *Pakshaghata* as per *Charaka Samhita.*

Inclusion criteria

1) Patients of either gender aged between 30-60 years will be taken for the study.
2) Subject having the adequate ability of communication, willingness, and ability to comply with study requirements.
3) Diagnosed subjects of *Pakshaghata* (Cerebrovascular accident) in recovery phase as per Brunnstrom stages of stroke recovery.

Exclusion criteria

1) Patients with altered higher mental function.
2) Patients with intracranial infections, intracranial space occupying lesion and trauma.
3) Pregnant and lactating mother.

Assessment criteria

1) *Prakriti* assessed by CCRAS Prakriti assessment scale.
2) NIHSS tool will be used to assess the severity of Stroke.

Also, the frequency of exposure to Pakshaghata was assessed through Vatavyadhi Nidana by the Likert-type scale.

Always and often were considered as Ati Sevana of Nidana**.**

Table 1: Likert-Like Scale.

Frequency	Likert like scale	No of days/week
Never	0 % chance	Not more than one day in a week
Rarely	10% and above chance I would have	1 or 2 days in a week
Sometimes	50 % and above chance I would have used	2-4 days in a week
Often	Frequently about 70% of chances I would have	5-6 days in a week
Always	In about 90% and above chances I could have	6-7 days in a week

RESULTS AND DISCUSSION

Through evaluation of frequencies on physical, physiological, and psychological characteristics of Prakriti by Prakriti Pariksha of CCRAS Prakriti assessment scale in Pakshaghata specifically Cerebrovascular Accident shows that maximum affected subjects were on the Vata-Pitta Prakriti 34(68%) followed by Vata-Kapha 6(12%) and Pitta-Vata 7(14%). 2(4%) patients were having *Kapha-Vata prakriti* and 1(2%) patient having *Pitta-Kapha prakriti.*

Table 2: Distribution of patients according to type of prakriti.

Prakriti	No of Subjects	Percentage
Vata-pitta	34	68.0
Vata-kapha	6	12.0
Pitta-vata	7	14.0
Pitta-kapha	1	2.0
Kapha-vata	2	4.0
Total	50	100.0

As the study was to find the relation between *Sharira Prakriti* and *Pakshaghata.* The majority of patients were found to be of *Vata- Pitta Prakriti*, the reason behind this would be as mentioned by different *Acharyas* that *Vata Prakriti* person when consumes *Vata prakopaka Ahara* and indulges in *Vata prakopaka Vihara*, he/she may develop *Vata Vyadhi* which can be very quick and severe in nature when compared to other two types of *Prakriti.*

Discussion on demographic data

In the present study, out of 50 patients maximum was 21(42%) patients who belonged to the age group of (56-60) years followed by 14 (28%) belonged to (51-55) years. Suggestive of shifting period of age group from adult to old age with dominance of *Vata* in them.

Gender wise incidence was noted more in males 78% (39) than females 22% (11). This might be due to the addictions to alcohol, tobacco etc. and also physical and mental stress due to occupation in males.

In this study 18% of the patients were of low economic status (poor& lower middle class), while 60% belonged to middle socio-economic status with *Vata-Pitta Prakriti* being predominant.

Indulging in excessive physical work with increased stress to maintain their socio-economic status there may be occurance of *Vata kopa* and *dushti* and *Pakshaghata.*

Mixed observations were seen in this study regarding the nature of work where 46% patients were involved in heavy work, 34% sedentary work.

Discussion on past history

Patients with Hypertension, Diabetic mellitus, was observed in a maximum section of patient population under this study, suggestive they had more risk for development of *Pakshaghata*.

Hypertensive patients 38(76%) are more observed in the study when compared to Diabetic Mellitus 21(42%). With predominancy in *Vata-pitta Prakriti* i.e., 25(73.50%) and 12(35.3%) respectively.

A high intraluminal pressure, Degenerative changes in smooth muscle cells and endothelium will lead to extensive alteration in endothelium and smooth muscle function in intracerebral arteries.

There are several possible mechanisms wherein diabetes leads to stroke include vascular endothelial dysfunction, increased early-age arterial stiffness etc.

Coronary artery disease, Varicose Veins and Hypothyroidism was noted less frequently in the study.

Distrbution of data based on risk factors

Habits

Among 50 patients, 14 (28%) patients having a habit of smoking and 24 (48%) patients have habit of alcohol consumption. and among them most often habituated are *Vata Pitta Prakriti*. Tobacco Chewing (8%) was observed in a minimal section of patient population.

Plausible mechanisms by which primary and environmental tobacco smoke exposure and alcohol can increase the risk of Cerebrovascular Accident are numerous and include

carboxyhemoglobinemia, increased platelet aggregability, increased fibrinogen levels, Hypertension, Atrial Fibrillation, Overweight, Liver damage and reduced HDL-cholesterol.

Distrbution of data based on family history

Among 50 patients, *Vata-Pitta Prakriti* individuals showed predominancy in family history of Cerebrovascular Accident, Hypertension and Diabetes mellitus.

Family history of cerebrovascular accident

Among 50 patients 22(44%) have Family H/O of Cerebrovascular Accident. Positive parental history of stroke may lead to an increased risk of stroke events through genetic heritability of stroke risk factors, such as elevated blood pressure, elevated serum cholesterol, and diabetes, familial sharing of cultural/environmental and lifestyle factors.

Family history of diabetes mellitus

Among 50 patients 19 (38%) patients have Family H/O Diabetic Mellitus

Most of the individual being *Vata-Pitta Prakriti* with heavy work in their occupation still they are known case of Diabetes mellitus indicating the *Sahaja Prameha*. Considering these facts, we can predict family positive history of Diabetes Mellitus in relatives is may be due to *Beeja Dushti* or because of faulty lifestyle. Indicates irrespective of *Prakriti* there could be development of *Prameha*

Family history of hypertension

Among 50 patients 28(56%) have Family H/O Hypertension.

The genetic inheritance of hypertension is largely multifactorial with environmental influences like high salt intake, lack of physical activity, etc.

Discussion on vatavyadhi nidana

Among the *Vata-Vyadhi Nidana* most frequent *Nidana*'s were observed are, *Ruksha Ahara,Vishamashana, Laghu Anna Sevana, Prajaagara, Divaswapna*, Excess Physical activity, *Vega Sandharana, Krodha*, and *Atichinta*.

1. Ruksha Ahara, Katu, Tikta and Kashaya rasa

Among 50 patients, 11 (22%) patients *Ruksha* and 17(34%) patients always used to consume *Katu Tikta Kashaya Rasa ahara*.

Excess intake of the *Ruksha* and *Katu, tikta, Kashaya rasa* causes *rukshata, laghuta, shitalta, darunta, kharata* in the body vitiating *vata*.

2. Vishamashana

Among 50 patients, 22(44%) patients used to always indulge in *Vishamashana.*

Abhojana, ajeerna bhojana, atibhojana, vishamashana leads to angnimandya. It impairs the production of *Rasa Dhatu* followed by *kshaya* of further dhatus. This *dhatukshaya* causes *vata prokopa.* The majority of the patients in this study who were indulging in *Vishamashana* were of *Vata* predominant *Prakriti* due to their work commitments and other reasons.

3. Laghu anna sevana

Among 50 patients, 23(46%) patients used to always consume *Laghu Anna*. Among them 20 patients of *Vata- Pitta Prakriti* persons were always indulging in *Laghu Anna*.

Anashana or Alpashana reduces bala, varna, upachaya, veerya, affects sara, sharira, mana, buddhi, indriyas further leading to eighty types of *vata vyadhies*

4. Ama: Indigestion

Among 50 patients, 16(32%) patients always used to indulge in dietary habits and lifestyle which leading to formation of *Ama*.

Ama is produced by *Ajeernashana and Adhyashana*. This *ama dosha* obstructs the path of *vayu (Margaavarana)* which results in vitiation of *Vata*.

5. Prajagara: Raatri jagarana

Among 50 patients, 18 (36%) patients used to always indulge in *prajagara.* 13 patients of *Vata-Pitta Prakriti* were always following *Prajagara*.

Excess worries, anger, smoke, physical exercise, fasting, uncomfortable bed, overwork, old age, different *Vata Vyadhis* are the causes of *Ratri jagarana*. *Raatri Jagarana* will provoke *Vata dosha* further disturbing other two dosha gradually as a *Viprakrushta Nidana* leading to *Pakshaghata*. In a person who is predominant of *Vata Prakriti* continuous *Prajagara* will result in increased risk of developing *Pakshaghata*

6. Divaswapna

Among 50 patients, 21(42%) patients used to always indulge in *Divaswapna*

Divaswapna is contraindicated in all the *rutus* except *Greeshma*. Because, it aggravates *Kapha*. *Divasvapna* does also causes *aruchi, avipaka, agninasha*, etc. *Divaswapna* is *Sarvadosha Prakopaka, Abhishyandakara* and Kapha-pitta *Vriddhikaarak*a. Because of sedentary life style and faulty habits leading to *Agnimandya* and formation of *Ama* which may be a *Viprakrustha nidana* for development of *Pakshaghata*. Suggesting the *Avaranajanya Vata Kopa* in the *Vata* predominant *Prakriti* individual.

7. Excess physical activity

Among 50 patients, 31 (62%) patients used to always indulge in excess physical activity. Excessive Exercise leads to diseases like thirst, emaciation, tiredness, bleeding disorders, cough, fever and vomiting which vitiates Vata dosha.

8. Vega sandharana

Among 50 patients, 40(80%) patients often (5-6 days in a week) used to follow *Vega sandharana.*

Suppression of urge does *vata kopa* leading to Dushti of *Apana vayu* causes upward movement of *Apana Vayu* resulting in imbalance between all the Vata dosha leading to many *vatajany*a diseases.

9. Krodha

Among 50 patients, 26(52%) patients used to always (6-7 days in a week) have *Krodha.*
Kama, krodha, bhaya, chinta, etc., are likely to trigger the *rajo guna*. As *Vata* is predominant in *rajo guna*. will vitiate *vata* along with *pitta* and in turn cause *vata vyadhi.*

Krodha is also included in the *Dharaneeya Vega* meaning which has to be suppressed with forgiving nature.

10. Atichinta

Among 50 patients, 23(46%) patients always used to (6-7 days in a week) indulge in *Atichinta*.

In a person suffering from *chinta, shoka,* etc., even the *matra yukta pathya ahara* is also not digested properly leading to *ama* formation and *Agnimandya*. This can lead to *Margavarodhjanya Pakshaghata.*

Discussion on Time and Type of cerebrovascular accident

Among 50 patients of cerebrovascular accident, it was found that majority of Time onset cerebrovascular accident is around morning 5:00AM to 6:00 AM and in the evening around 5:00PM to 6:00PM. Indicates *Vata Dosha* predominant *Kaala*.

Among 50 patients, 33(66%) patients having Infarct type of cerebrovascular accident, 17(34%) patients having haemorrhage type of cerebrovascular accident.

CONCLUSION

Sharira Prakrithi is a non – pathological status of Doshas formed in the body of an offspring during the time of conception. The *Prakriti* of a person will be present from *janma* (birth) to *marana* (death). *Prakiti* by nature, won`t produce *prakopa,kshaya* or *anyathabhava* in relation to *Dosha*. All these occur only in *vikruta* or morbid *Doshaja* person. If a disease is aligned with a person's *Prakriti*, there will be no change concerning that *Prakriti*, but rather an alteration in the *Dosha* due to external factors. The *Dosha* responsible for forming the *Prakriti* is distinct from the *Dosha* that becomes vitiated and leads to disease.

For instance, if a person with *Vata Prakriti* suffers from a disease caused by *Pitta,* their original *Prakriti* remains unchanged. The increase or decrease of the *Doshas* does not influence the *Prakriti* itself.

Among the study conducted on 50 patients of diagnosed cases of *Pakshaghata* (Cerebrovascular Accident) predominant *Prakriti* was found to be *Vata-Pitta Prakriti* By looking over the obtained results we can conclude that as *Pakshaghata* is predominantly a *Vata-Vyadhi* and in this study most of the patients were found to be *Vata* predominant *Prakriti* and less of *Pitta* Predominant and very few of *Kapha* predominant *Prakriti*. They were also indulging in different *Vata Prakopaka Nidana* indicates *Vata Prakriti* individuals are more prone for *Vata-Vyadhi* when they indulge in *Vata Prakopaka Ahara* and *Vihara* resulting in the disease *Pakshaghata*.

Prakriti assessment will help us provide more personalized treatment plan and medication and also Physician can guide the patients with proper diet and regimens according to the patient's *Prakriti* as most of patients are unaware of it.

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