



ETIOPATHOGENESIS OF PAKSHAGHATA

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ABSTRACT

Ability to move from one place to another is the primary need of all living being. The loss of reduction in the locomotive power or other voluntary activities of the individual makes him to depend on others for his routine needs and the life becomes miserable to him. *Pakshaghata* is the major neurological disorder that manifests as weakness and paralysis of one side of the body. The terms *pakshaghata* or *pakshavadha* are synonyms of the same disease and are used in classical treatises in various contexts. *Pakshaghata* is one among 80 types of *Nanatmaja Vatavyadhi* and is considered as a *Maharoga* from *Pakshaghata* is mentioned in *Brihatrayis* in *Vatavyadhi*. In Ayurveda, *snehana* and *swedana* were given prime importance to treat the *Pakshaghata*. *Nidana* of a Disease deals with the causative factors underlying the development of the disease. No specific reference is found about the *nidana* of *Pakshaghata* in the classical works of Ayurveda since it is included in the group of *Nanatmaja vyadhi* which is developed due to the vitiation of Vata dosha. The *nidana* of the *Vatavyadhi* are the precipitating factors of *vata dosha* are described in general. Hence the factors which are responsible for the vitiation of *vata dosha* may be considered as the primary of the fundamental cause of *Pakshaghata* also. Here the detail understanding of *vatavyadhi nidana* and *samprapathi* has an important aspect to understand the *Pakshaghata nidana*.

KEYWORDS: *Pakshaghata, Vatavyadhi, Ayurveda, nidana, samprapathi.*

INTRODUCTION

According to Ayurvedic concept, the disease affects the *Madhyama Rogamarga* and disrupting the functions of *Sira*, *Snayu*, and *Kandara*.^[1] Stroke is the most rampant clinical entity of Cerebro-vascular disease in developed countries. It is defined as an acute onset of focal or Global neurological deficit that lasts more than 24 hours and is attributable to the disease of Intracranial or Extra cranial Neuro vasculature. Severe strokes are often preceded by TIA. Stroke is the third most common cause of death. Old age is most significant risk factor. Among modifiable Risk factors, Hypertension and Smoking contribute most to the risk of the stroke. Other factors include Coronary Artery Disease, Atrial Fibrillation, Diabetes, and Oral Contraceptive Pills particularly by the female smokers.^[2] The word *Paksha* has got various meanings such as *Dehangam* which means Part of the body^[3] and *Parshva* which means Flank or side.^[4] Acharya Sushruta while explaining about *Pakshaghata* has used the word “*Paksha*” Dalhana commented on this by saying it as “*Shareerardham*”. *Ashtanga sangraha* and *Ashtanga Hridaya* also used the word “*Paksha*”

which gives the same meaning as mentioned by Sushruta. Vijayarakshita, mentor of Madhava *nidana* explains the meaning of “*Paksha*” as *Ardhanarishwaravat*.^[5] Sharangadhara Samhita, Bhavaprakasha, Yogaratnakara have used the word *Paksha* with the meaning as half of the body. Considering all the above references it can conclude that the word *Paksha* refers to one Side of body. The word *Aghata* depicts different meanings. Such as *Ghata*, *Vadha* means Killing^[6], *Hanana* means Destruction^[7], *Prahara* means Blow.^[8] So the word *Ghata* means Killing, Blow, Injury.^[9] *Vadha* means *Prana viyoga phalaka vyapara*.^[10] So the word *vadha* means killing, destruction, blow. From above description it shows that *Ghata* and *Vadha* has same meaning. So *Pakshaghata* and *Pakshavadha* are having same meaning.

NIDANA

Nidana of a Disease deals with the causative factors underlying the development of the disease. No specific reference is found about the *nidana* of *Pakshaghata* in the classical works of Ayurveda since it is included in

the group of *Nanatmaja vyadhi* which is developed due to the vitiation of *Vata dosha*. The *nidana* of the *Vatavyadhi* and the precipitating factors of *vata dosha* are described in general. Hence the factors which are responsible for the vitiation of *vata dosha* may be considered as the primary for the fundamental cause of *Pakshaghata* also. The functional and the structural changes observed in the body are due to the *samprapti bheda* of this particular disease. They are *Aaharaja*^[11,12], *Viharaja*^[11,12], *Aagantuja*^[11,12], *Manasika*^[11,12], *Kalaja*^[11,12]

Dosha Dushya Sammurchana denotes the *abhyantara karana* of the disease which may be due to two important reasons

1. *Dathukshaya*
2. *Margavarana*

On a critical analysis of the aetiological factors of *vatavyadhi* described by the scholars, one can see that all the factors of *vata dosha* are provoked by *Dhatukshaya* or *Margavarodha*.

SAMPRAPTI

The *samprapti* of a Disease deals with the nature of vitiation of *Doshas* and role of *dhatu* and *srotas* in the body. The way, in which the *Dosha* gets vitiated, mode of Progression of *Doshas*, Onset and Progress of disease is known as *Samprapti*. *Jati* and *Agati*^[13] are its synonyms. *Samprapti* can be of two types: (a) *Samanya samprapti* (b) *Vishesha samprapti*.

Samanya samprapti of Pakshaghata: *Samanya samprapti* of *Vata vyadhi* can be considered as *samanya samprapti* of *Pakshaghata*. It is described as follows. - *Nidana sevana* causes *Rikta srotas* leads to *Vata prakopa* and manifestation of *Vata vyadhi*.^[14] The same process takes place leading to *Chesta hani* of affected part. Hence *Samprapti* of *Pakshaghata* mentioned by Charaka would be considered as *Samanya Samprapti* of *Pakshaghata*. After causing damage to either the *Vama* or *Dakshina Parshwa*, *Vata dosha* leads to loss of function of affected side with or without causing *Vaksanga*.

Vishesha samprapti of Pakshaghata

Unless we know the *Vishesha Samprapti* of any disease it is not possible to have clear picture about the disease. So the study of *Vishesha Samprapti* might throw light for the better understanding.

1. Types of *Samprapti*
2. *Samprapti ghatakas* involved in *Pakshaghata*.
3. *Samprapti* due to *Dhatu kshaya* and *Margavarana*

Acharya Charaka has described six types of *Samprapti* in relation to *Pakshaghata* which can be described as follows.

1. *Sankhya samprapti*: *Sankhya* means number. *Sankhya samprapti* of *Pakshaghata* can be considered as only one for the reason of "*Karma*

kshaya karitvam" which is found in every variety of *Pakshaghata*.

2. *Pradhanya samprapti*: Here *rogarambaka dosha* is *Vata*, which may get vitiated primarily or secondarily. In case of *Margavarana*, *pitta* or *kapha dosha* interfere with the function of *vata*, there by causing *Pakshaghata*. In case of *Dhatu kshaya Vata dosha* predominantly deteriorates the *Dhatu* leading to *Pakshaghata*.
3. *Vidhi Samprapti*: (a) *Karana bheden* -- *Nija, Agantu*
(b) Mode of Presentation -- *Dhatu kshaya janya, Margavarana janya*
(c) *Dosha bheden* -- *Kevala vata, Pittanubanda, Kaphanubanda*
(d) *Sahdyasadyatva bheden* -- *Sadhya, Asadhya, Mridu, Daruna*

4. *Vikalpa Samprapti*: Knowledge of *Vikalpa Samprapti* helps to identify the individual variation in the presentation of *Pakshaghata*.

- a) Prominently due to *Kashaya rasa sevana* leads to *Rikta srotas* leads to *Vata prakopa* and then *Dhatu kshaya* causes *Pakshaghata*.
- b) *Tikshna, Ushna, Drava, Sara, Lavana Amla rasa sevana* leads to *Pitta prakopa* then *Pitta Dushti* occurs leads to *Rakta srava* causes *Pakshaghata*.
- c) *Snigdha, Sheeta, Guru, Manda, Madhura rasa sevana* causes *Kapha* vitiation leads to *Medo Vriddhi* causes *Damani pratichaya* manifests *Margavarodha*
- d) *Marmabhighata* causes *Rakta srava* leads to *Dhatu kshaya* causes *Pakshaghata*

5. *Bala Kala Samprapti*: It denotes the exacerbation of the disease. eg: *Kevala Vataja Pakshaghata* may exacerbate during *Varsha rutu, Vardhakya*. Similarly *Margavarodha janya. Pakshaghata* can manifest depending upon the involvement of *doshas*.

POORVARUPA

In classics, there is no description regarding *Purvaroop* of *Pakshaghata*.

But *Pakshaghata* is a *Vatavyadhi* and according to Acharya Charaka *Avyakta lakshanas* are *Purvaroop* of *Vatavyadhi*.

According to Chakrapani commentary on *Avyakta*^[15], few mild symptoms are to be taken as the *Purvaroop*. But according to *Madhukosha Vyakhya* of Madhava *Nidana*, the symptoms, which are not exhibited clearly, are *Purvaroop* and they are due to less severe causative factors - "Less or mild symptoms" As *Pakshaghata* is a *Vata Vyadhi* and *Vata* is regarded as *Ashukari* and *Sukshma*, it is difficult to assess the *Poorvaroopas* related to *Pakshaghata* as these are very unstable and swifter.

ROOPA

The most important and the essential feature of *Pakshaghata* is weakness of one side of the body. It may be either Left or Right. The functional loss of the Body is due to the involvement of the *Vata dosha* and subsequent *Shoshana* of *siras* and *snayu* of the affected parts. The weakness developed to the *mamsadhatu*, *siras* and *snayu* of the affected part causes looseness of the Joints and inability to the movements of the body.

According to Acharya Charaka this Disease may affect Upper or Lower Limb with Pain and cause difficulty in Speech. The clinical conditions described in the *Purvarooopa* stage with varying degree of severity may present in the *Vyakti stage* also but it depends upon the nature of the pathogenesis and involvement of *Dooshya* in it

Cheshtahani

Charaka mentioned the word *Cheshtahani*, where as Acharya Sushruta and Vagbhata have used the term "*Ardhakaya Akarmanya*". Dalhana commenting on the word *Akarmanya* has explained as "*Ishat Karma Kshayam*". Arunadutta explained it as "*Kriyayam Ashakta*"^[16] Vijayarakshitha explained it as "*Ishat Chesta Akshamah*"^[17]

Vyana Vayu is also responsible for different kinds of movements in the body. *Vyana* also controls the circulation of *Rasa* and *Rakta*, which are important nutrient source and thus when there is abnormality of *Vyana Vayu* the nourishment to body through it is affected resulting in *Dhatu Kshaya*. When *Prana vayu* influences upon *Vyana*, the function of *Indriya Nigraha* is lost so that most of voluntary movements cease to function.^[18] It means partial loss of function.

Role of Prana and Vyana Vata in relation to Cheshtahani

Prana vayu is concentrated more in the *Moordha* and it controls *Deha*, *Buddhi*, *Hridaya*, *Indriya* and *Chittah* and keeps them in normal functioning. So all types of *Cheshtas* are under the control of *Prana vayu*.

Affliction of Jnanendriya and Karmendriya in Pakshaghata

Shiras is considered as "*Uttamanga*" as it is the *Indriya Ayatana*.

The location of *Prana Vayu* is said to be *Shiras*. While explaining about.

Shiromarmabhighata Lakshana it is said to produce *Ardita*, *Chestahani*, *Mukatva*, *Gadgada*.^[19] Injury to *Shiro Marma* leads to vitiation of *Prana* and *Vyana Vayu* and cause loss of Voluntary functions in one side of body. This shows that there is decreased *Chala Guna* of *Vata*, but pathology is due to vitiation of *Vata* in *Shiras*. So in this case *Vridhhi* in *Eka Desha* and *Kshaya* in *Any Desha*. As a result of there will be *Dharana*, *Grahana*,

Gamana, *Pravartana* and *Niyamana hani Karma hani* in *Vagindriya*:

The symptom *Vaksthambha* is explained by Charaka. *Prana* and *Udanavayu* along with *Buddhi*, *Manas* and *Atma* helps in initiate meaningful and comprehensive speech. In *Pakshaghata*, due to the influence of *Prana* and *Udana Vayu* on *Vagindriya*, *Mukatva* may be an outcome. This can be possibly co-related with two different aspects of Speech function leading to *Dysarthria* or *Dysphasia*.

Achetana or Vichetana

Achetana is the word used by Sushruta while Vagbhata has used *Vichetana*.

Dalhana commented "*Achetana*" as "*Alpa chetana*".^[20] Gayadasa says that "*Na chetanam Achetanam*". *Vichetana* is explained as "*Ishat Sparshadi Jnana yuktam*".^[21] That is less sensation. Vijaya Rakshitha says that "*Alpa Chetana Ishat Sparshadi Jnana Iti Artaha*".

Vyana Vayu in its normal condition performs the circulation of *Rasa* throughout the body and there is relation between *Rasa* and *Tvak*. *Tvak* is the seat of *Sparsha*. If there is abnormality in *Vyana Vayu* it results in *Supti*.^[22]

This symptom is only mentioned by Charaka. "*Sankocha –Sankuchati iti*".

Sankocha occurs due to increased *Ruksha Guna* of vitiated *Vayu* that results in decrease in the *Sneha guna* present in *Sira*, *Snayu* and in *Sandhi* of *Hasta* and *Pada*.

Sira Snayu Shosha

Acharya Charaka and Vagbhata have mentioned this symptom. The word *Shosha* means Emaciation.^[23] *Shosha* is mainly by the increase in *Ruksha Guna* of vitiated *Vayu* which causes decrease in *Snigdha Guna* and texture of *Sira*, *Snayu*.

Sandhi Bandha Vimoksha

Acharya Sushruta and later authors mentioned it. It can be considered as Loss of co-ordination: In *Pakshaghata* due to *Hasta pada Sankocha* and *Stabdhatu* the patient is not in a position to use his limbs according to his will. So it means there is incordination between *Asthi*, *Sandhi*, *Snayu* and *Kandara*. In case of *Pakshaghata Sandhi Vishlesha* or *Sandhi Chyuti* is observed either because of continuous disuse or because of improper forceful passive movements during exercise.

DISCUSSION

Nidana of a Disease deals with the causative factors underlying the development of the disease. No specific reference is found about the *nidana* of *Pakshaghata* in the classical works of Ayurveda since it is included in the group of *Nanatmaja vyadhi* which is developed due to the vitiation of *Vata dosha*. The *nidana* of the *Vatavyadhi* and the precipitating factors of *vata dosha*

are described in general. Hence the factors which are responsible for the vitiation of *vata dosha* may be considered as the primary of the fundamental cause of *Pakshaghata* also. The *samprapti* of *Pakshaghata* can be categorized into 2 types *Samanya samprapti* (b) *Vishesha samprapti*.

CONCLUSION

Pakshaghata is one among the *Nanatmaja vyadhi* characterized by loss of function either in the right or left half of the body. *Pakshaghata* is considered among the ailments of the *madhyama rogamarga*. *Dosha Dushya Sammurchana* denotes the *abhyantara karana* of the disease which may be due to two important reasons that is *Dathukshaya* and *Margavarana*. *Dhatu Kshaya* and *Margavarodha* are the underlying causes of *Pakshaghata*. In both the conditions, provocation of the *vata dosha* occurs. Involvement of *Rasa, Rakta* and *Raktavaha Srotas* is also a characteristic feature of this Disease. *Rakta* and *Pitta* are interrelated. Hence in majority of cases *Pitta* stands as *Anubhanda Dosha* in the pathogenesis.

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