

CRITICAL ANALYSIS OF KAMPAVATA (PARKINSONISM)Deepa¹, Bhanu Pratap Singh²¹M. D Scholar, Dept. of *Sharir Rachana*, ²M.D Scholar, Dept. of *Sharir Kriya*
NIA, Jaipur, Rajasthan, India**ABSTRACT**

According to *Ayurveda*, most of the diseases of *Vata* are essentially the conditions of degenerative diseases of the nervous system. As many as 80 kinds of *Vata* diseases are described in *Samhitas*. The syndrome of Parkinsonism is commonly compared with *Kampa Vata*. The syndrome was comprehensively described by James Parkinson in 1817, but the review of much early literature would show that syndrome strikingly similar to Parkinsonism was already known and was categorized among *Vata* diseases in *Ayurveda*. Parkinsonism is prevalent all over the world and has no definitive treatment in conventional medicine except for the palliative prescription of anticholinergics together with levadopa and dopadecarboxylase inhibitor. The *Ayurvedic* treatment strategy is to combat *Vata dosha* and to sustain neuronutrition by *Rasayana* remedies. This article discusses *Vata* diseases as a class with emphasis on *Ayurvedic* therapies of Parkinsonism.

Key words: *Kampavata*, Parkinsonism, *Rasayana*, *Vata dosha*, Anticholinergics.

INTRODUCTION

Ayurveda is science that imparts all knowledge of life. It benefits health and factors responsible for its maintenance and promotion. It is the science which did not start with fundamental understanding but developed from observation of phenomenon which was then classified, analyzed and systematised. One of such science is the science of life '*Ayurveda*'.

Health is essential for enjoyment of all the worldly pleasures in a righteous manner. *Ayurveda* provides knowledge which is beneficial to life; in short it discusses all aspects of human life. *Ayurveda* is everlasting supreme science of medicine because it deals with every aspects of life.

The *Vata* which is the motivator and controller of other two *Dosha*, is responsible for manifestation of almost all diseases. *Vataja nanatmaja vikaras* are eighty in various classics. Major neuro-

logical problems come under *Vata vyadhis*. *Kampavata* is one of them.

"Na kampo vayuna vina."¹

Kampavata is slow progressive disorder of late adult life and is one of the most prevalent and common neurological disorder with more or less equal frequency in all countries around the world. Nearly two centuries have elapsed since disease is known but better treatment is still being sought.

Vyutpatti and Paribhasha

Kampa:-The word *Kampa* is derived from the root *Kapi* and suffixed by *Ghan* which gives the meaning 'to move' or 'to shake'. *Gatradi chalanam*² means shaking or movement in the body. The word *Kampa* conveys the meaning of shaking or tremor. **Vata:**-The term *Vata* is derived from root *Va* and suffixed by *Ktha*³ "*Va-gatigandhanayaho*"⁴. *Vata* is one of the three humours of body. *Gati*

and *Gandhana* are the two important functions of *Vata*. All the motor and sensory functions in the body are governed by *Vata*. The word *Karpavata* means the disorder of impaired *Vata*, in which the prime clinical manifestation is *Karpa*. Definition of Parkinsonism:-Marselen (1994) has defined Parkinsonism disease as “a clinical syndrome dominated by a disorder of movement consisting of tremor at rest, rigidity, elements of bradykinesia, postural and gait abnormalities associated with a distinctive pathology consisting of degeneration of pigmented brainstem nuclei including the dopaminergic substantia nigra, pars compacta with the presence of lewy bodies.”⁵

REVIEW OF LITERATURE

Charaka:-In *Charaka Samhita karpavata* is found by the name *Vepathu* and has been included in the *Vata nanatmaja vikaras*.⁶

Sushruta:-*Sushruta* has mentioned the symptoms like *Chestasanga*, *Sthamba* and *Gurugatrata* in the condition of *Kaphavrita vyana vayu*.⁷ *Karpa* have been mentioned as the *Upadrava* of *Prameha*.⁸ *Vepathu* is described as symptom in *Sthavara visha vinyana*.⁹

Kashyapa:-*Vepathu* has been mentioned under the *Vata nanatmaja vikaras*.¹⁰

Sharangadhara:-He has mentioned *Karpa* under *Vataja roga*.¹¹ He explained *Shira karpa* under *Shiroroga*.¹²

Bhavaprakash:-*Acharya Bhavamishra* has explained symptoms of *Sthamba* and *Karpa* in condition of *Snayugata vata*.¹³ He explained even excessive use of *Tikta rasa* will lead to *Karpa*.¹⁴

Yogaratanakar:-He has explained *Sarvanga karpa* and *Shirokarpa* under disease *vepathu* in *vata vyadhi*.¹⁵

Ashtanga sangrah and Ashtanga hridaya:-*Karpa* is described as a symptom of *Prakupita vata*.¹⁶ *Karpa* is also described

as a symptom of *Sarvanga vata*.¹⁷ Even *Karpa* is mentioned in *Kapha kshaya*, *Pitta kapha kshaya* and *Rasa kshaya* conditions.¹⁸

Vangasena:-He explained *vepathu* as *sarvanga karpa* under *vata vyadhi*.¹⁹

Nidana (Causative Factors)

“*Vyadhi utpatti hetu nidanam*”.²⁰ *Nidana* refers to all the causative factors which are responsible for the initiation and progress of the disease process. Treatment becomes easier by knowing the causative factors of a disease. ‘*Nidana parivarjana*’ is one type of *Chikitsa* which is mentioned in our classics. According to *Ayurveda* consideration of aetiological factors is important for diagnosis, prognosis and line of treatment.

Ayurveda adopts a holistic approach to the understanding of whole body physiology by explaining the body functions in terms of three bio factors called *Tridosha* (*vata*, *pitta*, *kapha*). In all applied considerations, the *Vata* system of *Tridosha* represents neuroscience in *Ayurveda*. The *Vata dosha* is responsible for entire neurophysiological phenomena operating the body. When any one takes *Vataja ahara –vihara* in excess amount, *Vata* gets vitiated. When the *Vata dosha* loses its equilibrium due to a wide range of aetiological factors, including tissue degeneration and damage (*dhatu kshaya*) and neuro obstructive diathesis (*margavarana*), it leads to the development of 80 types of *Vata* diseases or neurological diseases.

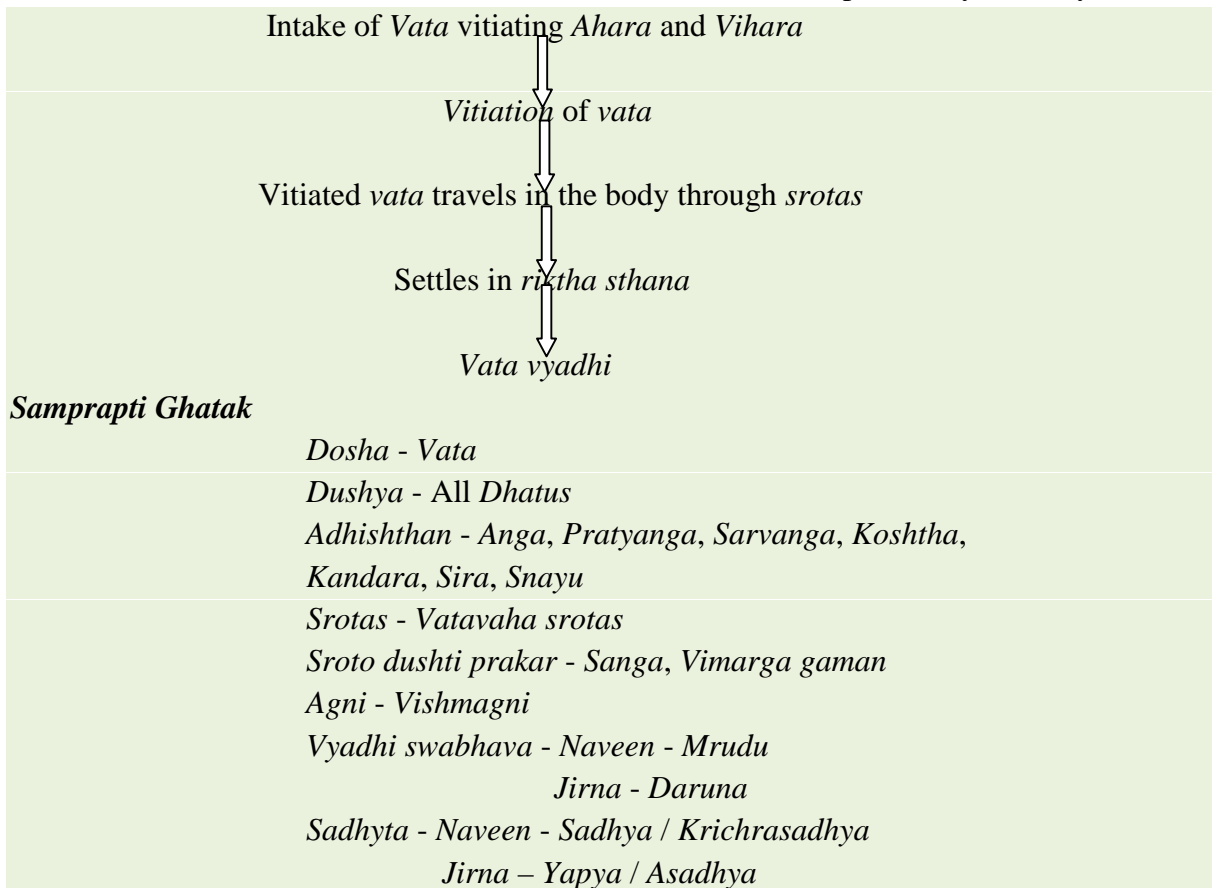
The aetiopathogenesis of Parkinsonism is not precisely known in conventional medicine. Combinations of several factors are involved in development of Parkinsonism. These factors include free radicals, accelerated aging, environmental toxins and genetic predisposition. Specific aetiology of Parkinsonism is related to aging and it develops in people over 50 years

old. Exposure to environmental chemicals may cause damage to basal ganglia and brain stem.

Samprapti (Pathology)

Samprapti means the complete procedure of manifestation of disease. In *Ayurveda*, no specific structural pathology of *Kampavata* is described other than its identification as a *Vata dosha* disease. The

Vata diseases as described in *Ayurvedic* classics include a wide range of neurological morbidities, including inflammatory, degenerative, obstructive and functional. The *Vata* diseases may manifest as *Vata vriddhi* (hyper functioning), *Vata kshaya* (hypo functioning) or *Avarana* (masked functioning). The *Samprapti* of *Vata* disease can be explained by this way-



In conventional medicine, Parkinsonism is described as a chronic progressive disease of extrapyramidal system of the brain where voluntary movements are disturbed with the appearance of involuntary movements and altered muscle tone. The pathology of Parkinsonism essentially involves a loss of dopaminergic neurons in the substantia nigra.²¹ The major symptoms are related to deficiency of dopamine. Dopamine is an inhibitory transmitter in basal ganglia. It is one of the three catecholamine neurotransmitter. It is caused by lesions in basal ganglia and is especially associated with damage to the

interconnecting system between substantia nigra and corpus stratum.

Roopa (Clinical features)

Many diseases are included under *Vata vyadhi*. They can be listed under these headings-

- 1 *Vata vyadhi* due to *Avarana*
- 2 *Ekanga vata vyadhi* (localised)
- 3 *Sarvanga vata vyadhi* (generalised)
- 4 *Koshthagata vata vyadhi*
- 5 *Dhatugata vata vyadhi*

Kampavata can be taken as *Ekanga* or *Sarvanga vata vyadhi*.

Clinical features of *Kampavata* in *Ayurveda* are similar to those described for Parkinsonism. The four main features are -

- Bradykinesia (abnormal slowness of voluntary movements, often with diminution of range of movements)
- Muscular rigidity (cog-wheel rigidity).
- Resting tremors (it is a pronation-supination tremor that is described as "pill-rolling," that is the index finger of the hand tends to get into contact with the thumb and perform a circular movement together).
- Postural imbalance (leading to disturbance of gait and falling).²²

Other symptoms are hypophonic dysarthria, monotonous speech pattern, shuffling gait with short steps, decreased autonomic movements, arm swing, masked face, dementia depression, constipation, urinary hesitancy, micrographia and orthostatic hypotension.

Sadhyata (Prognosis)

In *Ayurveda*, the prognosis of Parkinsonism is not specifically given. Most *Vata* diseases are not curable but the patient may be able to live with the diseases curtain degree of inconvenience and difficulties. As the disease progresses, patients develop rigidity and cannot take care of themselves. In extreme cases, death may occur from the patient's inability to breath, resulting in aspiration pneumonia or pulmonary embolism. *Ayurvedic* therapies available can make life much easier and increase life expectancy. Treatment with pharmacological agents or direct electrical stimulation of target areas (thalamus, subthalamic nucleus and globus pallidum) can provide relief in symptoms, good functional mobility for many years and a substantial increase in life expectancy.²³

Chikitsa (Treatment)

In *Ayurveda* *Aushadha* is considered as one of the four fold constituents of *Chikitsa chatushpada*. *Kampavata* being one of *Vata vyadhi* general line of treatment can be explained here. For better understanding these principles of treatment are explained under three headings-

1 *Shodhana Chikitsa*:- Following procedures are done under *Shodhana* for *Kampavata*-

- *Snehana Karma*
- *Abhyanga*
- *Swedana Karma*
- *Virachana Karma*
- *Nasya Karma*
- *Basti Karma*

2 *Shaman Chikitsa*:-Following drugs are mentioned in different classics for treatment of *Kampavata*-

- *Nakula taila (Bhaishajya ratnavali)*
- *Nakuladhya ghrita (Bhaishajya ratnavali)*
- *Brihat Chagaladi ghrita (Bhaishajya ratnavali)*
- *Maha narayana taila (Bhaishajya ratnavali)*
- *Triguna rasa (Sahasra Yoga)*
- *Sahacharadi taila (Sahasra Yoga)*
- *Rasna taila (Bhela Samhita)*
- *Ksheerabala taila (Ashtanga Hridaya)*
- *Varuni taila (Sharangadhara Samhita)*
- *Dhatturadi taila (Sharangadhara Samhita)*
- *Mashadi taila (Sharangadhara Samhita)*
- *Maharasnadi kwath (Sharangadhara Samhita)*
- *Devdarvadi kwath (Sharangadhara Samhita)*
- *Sarvaga kampa rasa (Rasa Ratnakar)*
- *Nakula taila (Harita Samhita)*
- *Mash taila (Vangasena)*
- *Maha masha taila (Chakradatta)*

- *Vishagarbha taila* (Yogaratanakar)
- 3 Other measures:-These are following-
- Exercise- Exercise increases the patients overall health and functionality.
 - Nutrition or Diet- Patient should be instructed to eat healthy diet. According to *Ayurveda Madhura, amla* and *lavana rasa* are *Pathya* in *Kampavata*.
 - Yoga and Meditation- They help to build resistance and immunity in the body. They also help in regulation and balance functioning of nervous system. *Ayurvedic* philosophy teaches us that the individual with a purely *sattvik* nature does not experience disease. Likewise, one who is sick, cultivates a *sattvik* mind brings rapid healing to their body. Hence all patients should be encouraged to reduce stress and cultivates practices such as meditation which bring peace of mind.

Being a neurodegenerative disease, Parkinsonism is treated by *Rasayana* or rejuvenative approach in *Ayurveda*.²⁴ *Rasayana* drugs are essentially nutraceutical agents and *Medhya rasayana* are specific neuronutrients or nervine tonics with nootropic effect. *Ashwagandha* (*Withania somnifera*), *Brahmi* (*Bacopa monnieri*), *Mandukparni* (*Centella asiatica*) and *Bala* (*Cida cordifolia*) are the common classical drugs advocated for this purpose. This is because *Ayurveda* considers such movement disorders under *vata dosha* and to sustain neuronutrition by *rasayana* remedies. *Kapikachu* (*Mucuna pruriens*) an edible legume and popular *Ayurvedic* aphrodisiac has also been used for treating *Kampavata*. With the recent discovery that *Mucuna pruriens* seeds are highly rich source of levodopa, the use of *Kapikachu* in *Kampavata* has tremendously increased. *Kapikachu* has been traditionally used for treating tremor disorders in *Ayurveda*.²⁵

In conventional medicine, the treatment is primarily based on increasing the levels of dopamine. Carbidopa and levodopa, dopamine receptor agonists and monoamino oxidase inhibitor are used to maintain the levels of dopamine. The pharmacological treatment are only symptomatic, they do not change the progression of the disease. If used skilfully, these drugs may dramatically improve the quality of life and functional ability. Another treatment option is surgery. The main surgical approach commonly used is pallidotomy (incision or partial destruction of globus pallidum) and high frequency deep brain stimulation with an electrode implanted in one of these target areas- thalamus, subthalamic nucleus and globus pallidum. These procedures are effective in providing relief from major symptoms and improving the quality of life but do not alter the course of the disease.

DISCUSSION AND CONCLUSION

- *Kampa* is a cardinal symptom of *Kampavata*. Increased movements are denoted as *Vepathu*, *Spandana*, *Sphurana* etc. as mentioned in *Ayurvedic* texts. *Vepathu* or *Kampa* is enumerated in *Vata nanatmaja vikaras*.
- *Kampavata* is a slow progressive disorder of late adult life and is one of the most prevalent neurological disorders.
- *Ayurveda* takes a unique approach to the management of above mentioned neuropathies with a special emphasis on eliminating their cause by *Panchkarma*, physiotherapy and medicinal treatment with help of a wide range of herbal and herbomineral drugs.
- *Panchkarma* therapy is especially advocated in the treatment of neurological diseases. Different type of *Snehana*, *Swedana* are efficacious. Besides special treatment like *Shirobasti*,

Shirodhara and *Basti* therapy are indicated in such diseases.

- *Ayurveda* describes a large number of nootropic drugs (stimulating to mental activity) and nervous system tonics (*rasayanas*). With all these *Ayurvedic* medicines claim good success in practice of neuromedicine.
- The levadopa content of *Mucuna pruriens* appears to be the basis for the therapeutic effect.
- Levadopa is the precursor of dopamine. Levadopa crosses the blood brain barrier so it is used to increase the dopamine concentration in treatment of Parkinson's disease.
- Levadopa effects rigidity, slowness, tremors, balance, gait but does not affect the problems related with involuntary functions.
- Levadopa does not slow the disease process but it improves muscle movement and delays severe disability.
- *Mucuna pruriens* endogenously accumulates 1-dihydroxyphenylalanine in range between 0.2 to 2.0% on a dry body weight basis in tissue culture.²⁶
- In a clinical trial, HP-200 made from *Mucuna pruriens* was found to be an effective treatment for patients suffering from Parkinsonism.²⁷

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CORRESPONDING AUTHOR

Dr. Deepa

Dept. of *Sharir Rachana*,
National Institute of Ayurveda,
Jorawer Singh Gate, Amer road,
Jaipur, Rajasthan, India

Email: drdeepabohra@gmail.com

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